Cottam Parkway Railway Station

Environmental Statement

Volume 2: Main Statement

Chapter 17: Cumulative Impacts

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17 Assessment of Cumulative Impacts

ES Chapter Number	Environmental Topic	Relevant Appendices
17	Cumulative Impacts	Appendix 17.1: Figure

17.1 Introduction

17.1.1 This chapter will focus on the individual environmental impacts assessed under each of the specialist chapters within this Environmental Statement (ES) and considers whether the combination of these impacts may act cumulatively to have a more significant overall effect.

17.1.2 Cumulative impacts have been defined as "impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the project" (European Commission, 1999). The assessment of cumulative impacts is a requirement of the Town and Country Planning (EIA) Regulations 2017 (as amended) ('the Regulations' herein).

17.1.3 The regulations state that a description of the likely significant effects should cover the direct effects and any cumulative effects of the development.

17.1.4 This chapter will consider the following impacts for the Scheme:

- The cumulation of effects of the Scheme with other proposed developments, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources, i.e. Intra-relationship; and,

- Whether, for the Scheme, the impacts identified for individual EIA topics could result in more significant impacts when considered in combination, i.e. Inter-relationship.

17.2 Relevant Legislative, Plans, Policies and Background

17.2.1 The assessment of cumulative effects has been undertaken for the Scheme to satisfy Schedule 4 5(e) Town and Country Planning (Environmental Impact Assessment) Regulations 2017 ('the regulations', herein) which states that the Environmental Assessment must consider:

"The likely significant effects of the development on the environment resulting from… the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources"

The following plans policies and guidance have also been referred to:

- National Planning Policy Framework (2021);
- Central Lancashire Core Strategy (2012); and,
- Preston Local Plan 2012-26 (2015).

17.3 Methodology

17.3.1 For the purpose of this Scheme, Advice Note Seventeen: Cumulative effects assessment has been utilised for the assessment of cumulative impacts. Although the methodology is usually intended for nationally significant infrastructure projects, it is appropriate to adopt this methodology as it is a comprehensive method of assessing the likely impact of cumulative effects of the Scheme.

17.3.2 The Advice Note presents a four-stage approach to Cumulative effects assessment:

- Stage 1: Establishing the long list
- Stage 2: Establishing the short list
- Stage 3: Information gathering
- Stage 4: Assessment

Stage 1

17.3.3 In Stage 1, a long list of other existing developments and/or approved developments that are likely to result in significant cumulative effects is identified. A zone of influence (ZOI) for each environmental aspect assessed in the Scheme is provided here and the relevant 'other existing developments and/or approved developments' are identified.

Stage 2

17.3.4 In Stage 2 a shortlist of 'other existing development and/or approved development' is established. This is to be achieved through the application of threshold criteria to the long list to establish a shortlist of other existing development and/or approved development and to ensure that the CEA is proportionate. The criteria would be used to guide a decision as whether to include or exclude 'other existing development and/or approved development' that falls within the ZOI of the Scheme from further assessment.

17.3.5 The criteria used to form the shortlist would not consider those developments that would be completed before construction begins on the Scheme as relevant to the assessment of cumulative effects and therefore, excluded from the shortlist.

17.3.6 Any development that proposes the construction of less than 10 residential properties (National Planning Policy Framework, Annex 2, 2021), extensions or modifications of existing properties that are unlikely to interact with the Scheme would also be excluded from the shortlist, any developments over 2km from the site would also be excluded from the shortlist and any development that is unlikely to have a temporal overlap with the construction of the Scheme would also be excluded from the shortlist (Table 17.3.3).

17.3.7 Any large developments of national significance within the Scheme boundary would automatically be added to the shortlist.

17.3.8 Residential and commercial developments that qualify for an EIA would also be retained on the shortlist.

17.3.9 Appendix 1: Matrix 1 - Identification of 'other development' for Cumulative effects assessment has been used to record the reasons for excluding certain developments from further consideration.

Stage 3

17.3.10 In Stage 3 of the cumulative effects assessment, information is gathered on each of the 'other existing development and/or approved development' shortlisted at Stage 2. As part of the Stage 3 process detailed information is compiled, to inform the Stage 4 assessment. The information gathered includes:

- Proposed design and location information;
- Proposed programme of construction, operation and decommissioning; and
- Environmental assessments that set out baseline data and effects arising from the 'other existing development and/or approved development'.

Stage 4

17.3.11 Stage 4 assesses the cumulative effects of the Scheme with the 'other existing development and/or approved development' identified in Stages 1-3.

17.3.12 Certain assessments, such as transport and associated operational assessments of vehicular emissions (including air and noise) may inherently be cumulative assessments. This is because they may incorporate modelled traffic data growth for future traffic flows. Where these assessments are comprehensive and include a worst case within the defined assessment parameters, no additional cumulative assessment of these aspects is required. Any such assumptions would be clearly stated.

17.3.13 In line with Advice Note 17, where significant cumulative effects between the Scheme and 'other existing development and/ or approved development' are only likely to arise in relation to one environmental aspect area, the assessment would focus on that issue only. This is done to keep the assessment proportionate to the effect being assessed. Consequently, some effects would need only very brief information to indicate that they have been considered. A precautionary but pragmatic approach, based around the best available evidence, would be used where baseline data or data about the environmental effects of 'other existing development and/or approved development' are incomplete.

17.3.14 Once the environmental aspects have been assessed in terms of their likelihood of occurrence, the significance of these aspects are determined. Significant results are those of moderate and above impact and non-significant results are those with a neutral, slight or negligible impact.

17.3.15 The methodology to be used in this assessment of cumulative effects is adapted from the advice given in Advice Note Seventeen (2012). Consequently, the tiering system stipulated in paragraph 3.1.5 has been omitted. This has been omitted due to its reliance on the Planning Inspectorate's Programme of Projects which is not relevant to this scheme.

Limitations

17.3.16 Gathering data from a range of planning applications within the zone of influence of the Scheme may cause issues. To be required to undertake an EIA and the complete suite of environmental assessment that is required, developments must meet criteria set out in the EIA regulations. Some of the surrounding applications do not meet these thresholds. Consequently, the number of surveys or the environmental aspects that are being surveyed may not be directly comparable to those undertaken for the Scheme. Where this has occurred, professional judgement has been used to extract and analyse the most important data from the application.

17.4 Assessment of the Cumulative Effects of the Other Developments

17.4.1 Table 17.3.1 summarises the zones of influence (ZOI) for each environmental aspect assessed in the Scheme.

17.4.2 Table 17.3.2 provides a long list of other existing developments and/or approved developments that may result in significant cumulative effects on the Scheme.

Table 17.3.1: ZOI for environmental aspects assessed in the Scheme.

Environmental aspect	Zone of Influence
Air Quality	Construction dust and vehicle emissions – 500m Operational plant emissions – 200m
Landscape and Visual Impact	Soft and hard landscaping and panoramic views – 1km
Ecology	Designated sites for Nature Conservation – 1km to 5km Desk study for records of protected and notable species - 1km Field surveys for habitats and species - 500m from the Scheme boundary including any temporary working areas
Cultural Heritage	Physical effects on buried archaeology –1km
Noise and Vibration	Construction noise - 300m from the closest construction activity Construction vibration - A study area of 100m from the closest construction activity with the potential to generate vibration Operational noise assessment - within 600m of new road links or road links physically changed or bypassed by the Scheme or the area within 50m of other road links with potential to experience a short-term Basic noise level change of more than 1.0dB(A) because of the project.
Soils, Geology and Hydrogeology	Geo environmental desk study - 250m
The Water Environment	Surface water quality, and surface water supply, 500m buffer in all directions around the provisional site boundary. 1km downstream of proposed outfalls for Protected areas. Hydromorphology 500m upstream and downstream of scheme boundary. Flood risk 500m buffer in all directions around the provisional site boundary extended by up to 1km

Environmental aspect	Zone of Influence
	downstream Groundwater 1km buffer in all directions around the provisional site boundary
Climate Change	Up to 1km
Human Health	Baseline health profile - 2km
Traffic and Transport	Variable dependent on transport mode
Land use and accessibility	Variable
Materials	Lancashire area including Blackpool and Blackburn

Table 17.3.2: Long list of other existing developments and approved developments.

ID	Application Number	Permission Type	Location	Proposal	Decision Date	Development commenced?
Approved Applications						
Outline						
12	06/2012/0145	Outline	Sidgreaves Lane, Lea Road and Lancaster Canal - Cottam Hall, Lea, Preston, Lancashire	Outline application for the redevelopment of 53 hectares of land for residential development of up to 1100 dwellings	22/03/2013	Commenced
13	06/2011/0473	Outline	Haydock Grange, Hoyles Lane, Preston, Lancashire, PR4 0LB	Erection of 450 no. dwellings, 3no. shops, public parking to serve existing community facilities, children's play areas, open space provision, new vehicular accesses from Tabley Lane, Sandy Lane and Hoyles Lane	09/07/2013	Commenced
14	06/2017/1036	Outline	Land adjacent Ashdene, 268 Hoyles Lane, Preston, PR4 0LD	Outline planning application for 10no. dwellings (all matters reserved)	08/06/2018	Complete
	06/2020/0628	Variation of condition		Erection of 9no. dwellings and internal access road (pursuant to 06/2020/0283 to seek variation of conditions no.1 'Approved Plans', condition no.4 'Means of Enclosure' and condition no. 5 'Landscaping')	24/08/2020	

16	06/2018/0975	Outline	Land opposite 92 Darkinson Lane, Preston, PR4 0RH	Outline planning application for three pairs of semi-detached dormer bungalows with associated infrastructure and access off Darkinson Lane (access, appearance, layout and scale applied for)	17/01/2019	Commenced
18	06/2018/1238	Outline	White Gables, Bartle Lane, Preston, PR4 0RU	Outline planning application for 2no. dwellings including layout and access off Bartle Lane and demolition of existing outbuildings (all other matters reserved)	11/01/2019	No
Reserved Matters						
0	06/2017/0324	Reserved Matters	Land West of The Weald, Preston, PR4 0NU	Reserved matters application (namely access, appearance, landscaping, layout and scale) pursuant to outline permission 06/2016/0046 for erection of 119no. dwellings	15/03/2018	Commenced
1	06/2015/0243	Reserved Matters	Land adjacent to Cottam between Cottam Way, Lea Road & Lancaster Canal, Cottam Hall, Preston	Reserved matters application for 283 dwellings, including associated infrastructure, commercial and community facilities, open space provision, landscaping and ecological mitigation measures	23/07/2015	Commenced
2	06/2017/0366	Reserved Matters	Land North of Maxy House Farm, Sandy Lane	Reserved matters application (namely access, appearance, landscaping, layout and scale) pursuant to outline permission 06/2016/0291 for 213 dwellings	14/11/2017	Commenced
3	06/2015/0530	Reserved Matters	Hoyles Lane and to the east of Sidgreaves Lane,	Erection of 350no dwellings, new vehicular access from Hoyles Lane and Sidegreaves Lane, open space,	17/12/2015	Commenced

			Lea, Preston, Lancashire	landscaping and associated infrastructure		
5	06/2016/1026	Reserved Matters	Vine House Farm, 38 Darkinson Lane, PRESTON, PR4 0RJ	Reserved matters application (namely access, appearance, landscaping, layout and scale) pursuant to outline planning permission 06/2013/0701 for 4no. detached dwellings	08/12/2016	No
11	06/2017/1385	Reserved Matters	Haydock Grange, Hoyles Lane, Preston, Lancashire, PR4 0LB	20no. dwellings with associated landscaping and associated works	26/03/2021	Complete
19	06/2019/0114	Reserved Matters	Plots 1-3 Cottam Hall, Land East of Sidgreaves Lane,South of Hoyles Lane & North of Lea Road, at Cottam Hall, Preston	Reserved matters application (namely access, appearance, landscaping, layout and scale) pursuant to outline permission 06/2016/0046 for the residential development of 141no. dwellings and associated development	06/08/2019	Commenced
20	06/2019/0585	Reserved Matters	Haydock Grange, Hoyles Lane, Preston, PR4 0LB	Reserved matters application pursuant to outline planning application 06/2011/0473 89 dwellings	13/08/2019	Commenced
034	06/2020/0152	Reserved Matters	Darkinson Stables, Darkinson Lane, Lea Town, Preston, PR4 0RE	Reserved matters application (namely access, appearance, landscaping, layout and scale) pursuant to outline planning permission 06/2019/0865 for 1no. dwelling	12/05/2020	Commenced

25	06/2015/0868	Reserved Matters	248 Lightfoot Lane and land to the rear of 248 Lightfoot Lane, Preston, PR4 0LA	erection of 10no. dwellings (plots 155, 156, 181, 182, 187, 188 and 192 to 195)	20/12/2019	Commenced
Full and Hybrid						
4	06/2017/0978	Full	Land adjacent 91 Hoyles Lane, Cottam, Preston, PR4 0LB	3no. dwellings and new vehicle access from Hoyles Lane	22/10/2019	No
6	06/2017/0255	Full	Former Cottam Brickworks, Cottam Avenue	Reserved matters application (namely access, appearance, landscaping, layout and scale) (pursuant to outline 06/2009/0499) for 93no. dwellings	15/02/2018	Commenced
7	06/2017/0256	Full	Former Cottam Brickworks, Cottam Avenue	21no. dwellings and associated infrastructure	26/03/2019	Commenced
8	06/2016/0579	Full	Woodlands Barn, Bartle Lane, Bartle, Preston, Lancashire, PR4 0RU	7no. detached dwellings with access, landscaping and associated works	29/09/2016	Commenced
9	06/2016/0367	Full	Land off Sandy Lane, Cottam, Preston, Lancashire, PR4 0LE	30no. dwellings and new vehicular access off Sandy Lane	29/09/2016	No
17	06/2018/1069	Full	3 Nog Tow Bank, Tabley Lane, Preston, PR4 0LH	Demolition of existing dwelling and erection of 8no. Dwellings and creation of new access road	04/12/2018	Commenced

22	06/2018/0885	Outline	Land off Riversway and west of Dodney Drive, Lea, Preston	Outline planning application seeking approval of access for up to 280 dwellings, with associated infrastructure and open space	11/01/2021	No
035	06/2019/0764	Full	Land east of White Gables, Bartle Lane, Preston, PR4 0RU	2no detached dwellings with vehicular access onto Bartle Lane	07/11/2019	No
21	06/2019/1068	Full	Laburnum House Farm, Bartle Lane, Preston, PR4 0RU	Permission in Principle Application for up to 9no. dwellings	22/10/2019	No
33	LCC/2016/0046	Full	Land In Lea, Cottam and Bartle And To The West And North Of The Existing Built Up Area Of Preston.	Development of new highways including Preston Western Distributor, Cottam link road and East West link road. The development includes a new motorway junction to the m55 together with temporary soil storage and contractor areas, cycle track alongside all highways, water attenuation ponds, diversion/stopping up of public rights of way, landscaping and ecology mitigation areas, construction of two bridges, two viaducts, two underpasses, a cattle creep and diversion of the Hodder aqueduct.	19/11/2018	Commenced
24	06/2020/0888	Hybrid	Land at Bartle, Preston	Hybrid Planning Application which seeks Full planning permission for new roundabout junction on PWRR with two spur access; and Outline planning permission for residential development up to 1,100 dwellings	05/08/2021	No

32	06/2019/1055	Full	Land at West Park Avenue, Preston, PR2 1UH	12no. dwellings and 1no. building comprising library and retail unit with associated parking and landscaping	10/09/2019	No
Pending						
15	06/2018/0705	Full	Land to the north of Hoyles Lane & east at Sidgreaves Lane, Lea, Preston	48no. dwellings, with associated vehicular access, landscaping and associated infrastructure		No
036	06/2020/1440	Full	Bartle Hall, Lea Lane, Preston, PR4 0HA	4no. dwellings and associated works		No
31	06/2020/0652	Full	Land off Tom Benson Way, Preston, PR2 1SG	35no. Dwellings		No
28	06/2021/1414	Full	Land South of, Bartle Lane, Preston, PR4 0RU	Hybrid Planning Application comprising of:1. Full planning application for erection of 42no. dwelling; and 2. Outline planning permission for residential development of up to 480no. dwellings seeking approval for access (all other matters reserved)		No

Stage 2

17.4.3 In Stage 2 of the assessment, a shortlist of planning applications nearby from those that have the greatest potential to contribute to the cumulative impacts of the Scheme is developed. The definition of major developments is defined in The Town and Country Planning (Development Management Procedure) (England) Order 2015 as:

- the winning and working of minerals or the use of land for mineral-working deposits;
- waste development;
- the provision of dwelling/houses where—
    - the number of dwelling/houses to be provided is 10 or more; or
    - the development is to be carried out on a site having an area of 0.5 hectares or more and it is not known whether the development falls within sub-paragraph (c)(i);
- (d) the provision of a building or buildings where the floor space to be created by the development is 1,000 square metres or more; or
- (e) development carried out on a site having an area of 1 hectare or more.

17.4.4 Minor developments are defined as being below these thresholds. The developments with the greatest potential to cumulatively impact the Scheme are major scale developments.

17.4.5 Any developments that would begin in October 2022 are considered to have temporal overlap with the Scheme and are likely to contribute to its cumulative effects and have subsequently been included in the short list.

17.4.6 Developments that have already been constructed would not be considered in the shortlist.

17.4.7 Geographic location has also been considered when developing the shortlist. Those developments that are closest to the Scheme have been considered with professional judgement to determine whether it is likely that there would be a notable contribution to the cumulative impacts of the Scheme. Developments that are further away have also been considered with professional judgement to determine their relevance to the cumulative impacts of the Scheme.

17.4.8 Other factors such as the nature and/or capacity of the receiving environment that would make a significant cumulative effect with 'other existing development and/or approved development' more or less likely has been assessed. Where relevant, a source-pathway-receptor approach has been utilised to inform the assessment.

17.4.9 The shortlist of other existing development and/or approved developments can be found in Table 17.3.4.

17.4.10 Applications featured in the long list may have been omitted from the shortlist after the assessment of the following aspects of the development:

- **Temporal scope:** Consideration of the relative construction, operation and decommissioning programmes of the 'other existing development and/or approved development' identified in the ZOI together with the NSIP programme, to establish whether there is overlap and any potential for interaction.
- **Scale and nature of development:** Consideration of whether the scale and nature of the 'other existing development and/or approved development' identified in the ZOI are likely to interact with the proposed NSIP. Statutory definitions of major development and EIA screening thresholds may be of assistance when considering issues of scale.
- **Other factors:** Consideration of whether there are any other factors, such as the nature and/ or capacity of the receiving environment that

would make a significant cumulative effect with 'other existing development and/or approved development' more or less likely and may consider utilising a source-pathway-receptor approach to inform the assessment.

- **Documentation:** The Cumulative effects assessment shortlisting process has been documented using Matrix 1 (Appendix 1) from Advice Note Seventeen: Cumulative effects assessment relevant to nationally significant infrastructure projects. The reasons for excluding any development from further consideration should be clearly recorded. This will provide decision makers, consultation bodies and members of the public with a clear record of 'other existing development and/or approved development' considered and the applicant's decision-making process with respect to the need for further assessment.

Table 17.3.3: Matrix 1 distance, temporal overlap and scale impacts on Scheme.

ID	Application Number	Distance from Scheme	Overlap in temporal scope?	Scale and nature of development likely to have a significant effect?	Status	Progress to Stage 3/4?
12	06/2012/0145	500m	Yes	1100no. residential dwellings unlikely to have a significant effect on the Scheme	Commenced	Yes
10	06/2018/0705 >3 years without progress	1.2km	No	48no. dwellings	No	No
13	06/2011/0473	2km	Yes	450no. residential dwellings, 3no. shops unlikely to have a significant effect on the Scheme	Commenced	Yes
14	06/2017/1036 06/2020/0628	900m	No	10no. residential dwellings unlikely to have a significant effect on the Scheme and 9no. residential dwellings unlikely to have a significant effect on the Scheme	Complete	No

16	06/2018/0975	1km	No	6no. residential dwellings below threshold for the significant impact on the Scheme.	No	No
18	06/2018/1238	2km	No	2no. residential dwellings below threshold for the significant impact on the Scheme.	Commenced	No
0	06/2019/0114 06/2017/0324 06/2016/0046 06/2015/0243 06/2012/0145	1km	Yes	119no. residential dwellings	Commenced	Yes
1	06/2015/0243	370m	Yes	283no. dwellings	Commenced	Yes
2	06/2017/0366 06/2016/0291	1.8km	Yes	213no. dwellings	Commenced	Yes
3	06/2015/0530	860m	Yes	350no. dwellings	Commenced	Yes
5	06/2016/1026 06/2013/0701 >3 years without progress	1.3km	No	4no. detached dwellings below threshold for the significant impact on the Scheme.	No	No

11	06/2017/1385	1.8km	No	20no. dwellings	Complete	No
19	06/2019/0114 06/2016/0046	577m	Yes	141no. dwellings	Commenced	Yes
20	06/2019/0585 06/2011/0473	1.6km	Yes	89no. dwellings	Commenced	Yes
034	06/2020/0152 06/2019/0865	1.0km	No	1no. dwelling below threshold for the significant impact on the Scheme.	Commenced	No
25	06/2015/0868 06/2014/0352	2km	Yes	10no. dwellings	Commenced	Yes
4	06/2017/0978 >3 years without progress	1.6km	No	3no. dwellings below threshold for the significant impact on the Scheme.	No	No
6	06/2017/0255 06/2009/0499	1.4km	Yes	93no. dwellings	Commenced	Yes
7	06/2017/0256	1.4km	Yes	21no. dwellings	Commenced	Yes
8	06/2016/0579	2km	Yes	7no. dwellings below threshold for the significant impact on the Scheme.	Commenced	No

9	06/2016/0367 >3 years without progress	1.5km	No	30no. dwellings	No	No
17	06/2018/1069	2km	Yes	8no. dwellings below threshold for the significant impact on the Scheme.	Commenced	No
22	06/2018/0885 >3 years without progress	940m	No	280no. dwellings	No	No
035	06/2019/0764	2km	No	2no. dwellings below threshold for the significant impact on the Scheme.	No	No
21	06/2019/1068	2km	No	9no. dwellings below threshold for the significant impact on the Scheme.	No	No
33	LCC/2016/0046	430m	Yes	Development of new highways	Commenced	Yes
24	06/2020/0888	2km	No	1,100no. dwellings	No	Yes
32	06/2019/1055 >3 years without progress	1.3km	No	12no. dwellings	No	No

15	06/2018/0705 >3 years without progress	1.1km	No	48no. dwellings	No	No
036	06/2020/1440	2km	No	4no. dwellings below threshold for the significant impact on the Scheme.	No	No
31	06/2020/0652	1.4km	No	35no. dwellings	No	Yes
28	06/2021/1414	1.6km	No	42no. dwelling and 480no. dwellings	No	Yes

Table 17.3.4: Short list of other existing developments and approved developments.

ID	Application Number	Permission Type	Location	Proposal	Decision Date	Development commenced?
0	06/2019/0114	Reserved matters (major)	Sidgreaves Lane, Lea Road and Lancaster Canal - Cottam Hall, Lea, Preston	Reserved matters application (namely access, appearance, landscaping, layout and scale) pursuant to outline permission 06/2016/0046 for the residential development of 141no. dwellings and associated development	06/08/2019	Commenced
	06/2017/0324	Reserved Matters		Reserved matters application (namely access, appearance, landscaping, layout and scale) pursuant to outline permission 06/2016/0046 for erection of 119no. dwellings	15/03/2018	
	06/2016/0046	Variation of a condition (major)		Variation of conditions no.1 "Approved Plans", no.7 "Code for Sustainable Homes", no.15 "Parking", no.38 "Air Quality Mitigation Scheme" and removal of conditions no.10 "Improvements to M55 Junction 1" and no.'s. 41-70 "Site K" attached to outline planning permission 06/2012/0145.	02/03/2017	
	06/2015/0243	Reserved matters (major)		Reserved matters application for 283 dwellings, including associated infrastructure, commercial and community facilities, open space provision, landscaping and ecological mitigation measures	23/07/2015	

	06/2012/0145	Outline application (major)		Outline application for the redevelopment of 53 hectares of land for residential development of up to 1100 dwellings (Class C3), retail (Class A1 500 sq.), commercial (Class A3 1600 sq.) and community facilities (Class D1/D2), children's play areas, open space provision, landscaping and associated infrastructure including internal road layout, footpaths, cycle routes and ecological mitigation measures (all matters reserved)	22/03/2013	
2	06/2017/0366	Reserved matters (major)	Land North of Maxy House Farm, Sandy Lane	Reserved matters application (namely access, appearance, landscaping, layout and scale) pursuant to outline permission 06/2016/0291 for 213no. dwellings	14/11/2017	Commenced
	06/2016/0291	Outline application (major)		Outline application for the residential development (Class C3) of 10.28 hectares of land for up to 230 dwellings, open space areas and other associated infrastructure (all matters reserved)	01/12/2016	
3	06/2015/0530	Full application (major)	Hoyles Lane and to the east of Sidgreaves Lane, Lea, Preston, Lancashire	Erection of 350no dwellings, new vehicular access from Hoyles Lane and Sidgreaves Lane, open space, landscaping and associated infrastructure	17/12/2015	Commenced
6	06/2017/0255	Reserved matters (major)	Former Cottam Brickworks, Cottam Avenue	Reserved matters application (namely access, appearance, landscaping, layout and scale) (pursuant to outline 06/2009/0499) for 93no. dwellings	15/02/2018	Commenced

	06/2009/0499	Outline application (major)		Mixed use re-development of site (13.8 hectares) incorporating: i) Full planning application for erection of a Class A1 retail superstore (4,366 sqm) and petrol filling station (88 sqm) with associated car parking and servicing; creation of local nature reserve; construction of marina; main access road into site and spine road through site including internal site roundabout ii) Outline planning application (all matters reserved) for erection of up to 206 residential units; Class B1 offices (4,186 sqm); Class A3/A4 restaurant/public house (314 sqm); and ground floor commercial uses (Classes A2, A3, A4, B1a, D1) (approximately 829 sqm) (HYBRID APPLICATION)	08/03/2012	
7	06/2017/0256	Full application (major)	Former Cottam Brickworks, Cottam Avenue	21no. dwellings and associated infrastructure	26/03/2019	Commenced
13	06/2011/0473	Outline application (major)	Haydock Grange, Hoyles Lane, Preston, Lancashire, PR4 0LB	Erection of 450no. dwellings, 3no. shops, public parking to serve existing community facilities, children's play areas, open space provision, new vehicular accesses from Tabley Lane, Sandy Lane and Hoyles Lane, internal road layout, footpaths and cycle routes together with associated infrastructure and demolition of existing agricultural buildings (outline application)	09/07/2013	Commenced

	06/2019/0585	Full application (major)		Reserved matters application (namely appearance, landscaping, layout and scale) pursuant to outline planning application 06/2011/0473 for 89no. dwellings.	13/08/2019	
23	06/2020/1421	Outline	Land to the north of Maxy Lane, to the east of Sandy Lane and to the west of Tabley Lane, Higher Bartle, Preston	construction of up to 500 dwellings; a local centre; public open space, recreation facilities; roads, cycleways, footpaths (connections to East-West Link Road); construction of drainage infrastructure	Pending	Pending
24	06/2020/0888	Hybrid	Land at Bartle, Preston	Hybrid Planning Application which seeks Full planning permission for new roundabout junction on PWRR with two spur access; and Outline planning permission for residential development up to 1,100 dwellings	05/08/2021	Construction pending
25	06/2015/0868	Reserved matters (major)	248 Lightfoot Lane and land to the rear of 248 Lightfoot Lane, Preston, PR4 0LA	Erection of 10no. dwellings (plots 155, 156, 181, 182, 187, 188 and 192 to 195)	19/01/2016	Commenced
	06/2014/0352	Variation of a condition (major)	250 Glenroyd Lightfoot Lane, Preston, Lancashire, PR4 0LA	Variation of conditions nos. 15, 18, 20, 21 and 26 attached to outline planning permission 06/2012/0822 to enable the phased discharge of conditions (to accord with the phasing of development) and to enable the submission of an alternative foul drainage solution	16/09/2014	

	06/2012/0822	Outline application (major)	Lightfoot Lane, Higher Bartle, Preston, Lancashire, PR4 0LA	Outline planning application for the residential development (Class C3) of 14.2 hectares of land for up to 330no. dwellings, new access junction from Lightfoot Lane, open space areas, landscaping, internal access road, pedestrian and cycle paths and other associated infrastructure	12/08/2013	
28	06/2021/1414	Full application (major)	Land South of, Bartle Lane, Preston, PR4 0RU	Hybrid Planning Application comprising of:1. Full planning application for erection of 42no. dwelling; and 2. Outline planning permission for residential development of up to 480no. dwellings seeking approval for access (all other matters reserved)	Pending	Pending
29	06/2019/1451	Full application (major)	Former Cottam Brickworks, Cottam Avenue, Preston	Hybrid planning application for development comprising: i. Full planning application for the erection of a retail foodstore (1,785 sqm) (Use Class A1) together with associated car parking, servicing, access and landscaping; ii. Outline planning application (all matters reserved excluding access) for the erection of up to 11,425 sqm of flexible use commercial floorspace for A1, A2, A3, A4, B1, C3 and D1 uses with up to 229 car parking spaces; up to 89 no. residential dwellings; and associated landscaping, car parking, servicing and open space; iii. Detailed vehicular access for retail/commercial area (the	08/04/2022	Commenced

				village centre) including access arrangements from Tom Benson Way and Cottam Avenue and a detailed point of vehicular access to the proposed residential area (access from the village centre is reserved).		
30	06/2020/1344	Outline application (major)	Land south of Bartle Lane, Lower Bartle, Preston, PR4 0RU	Hybrid Planning Application comprising of: 1. Outline planning application for up to 195no. dwellings seeking approval for access from Bartle Lane only (all other matters reserved); and 2. Full planning application for 55no. dwellings (Phase 1)	Pending	Pending
31	06/2020/0652	Full application (major)	Land off Tom Benson Way, Preston, PR2 1SG	35no. dwellings	Pending	Pending
33	LCC/2016/0046	Full application (major)	Land In Lea, Cottam And Bartle And To The West And North Of The Existing Built Up Area Of Preston.	Development of new highways including Preston Western Distributor, cottam link road and east west link road. the development includes a new motorway junction to the m55 together with temporary soil storage and contractor areas, cycle track alongside all highways, water attenuation ponds, diversion/stopping up of public rights of way, landscaping and ecology mitigation areas, construction of two bridges, two viaducts, two underpasses, a cattle creep and diversion of the hodder aqueduct	19/11/2018	Commenced

17.4.11 In total, 14 developments have been shortlisted as having the potential to cumulatively impact the Scheme. These developments will be taken forwards for further analysis in Stage 3 of the assessment.

Limitations

17.4.12 A residential planning application is currently being developed associated with the screening request no. 06/2020/1229. The sites for these developments are located to the immediate north and south of Cottam Parkway Railway Station. Currently, few details are available regarding these developments however, due to the proximity and nature of the developments, these developments have the potential to impact the Scheme. Consequently, any known information on the development has been included in the assessment.

Stage 3

17.4.13 Table 17.3.5 provides a summary of the relevant environmental information for each application shortlisted in Stage 2. Although the impacts of construction are likely to be temporary and mitigated through the relevant construction environmental management plans with the exception of the Story Homes development and the Cottam Hall development, there is still the possibility of these impacts leading to cumulative effects. As such, these have been judged on a case-by-case basis.

Table 17.3.5: Summary information from environmental assessments of Other Developments

ID	Application Number	Topic	Summary of available environmental assessments
23	06/2020/1421	**Air quality**	During the construction, assuming good practice dust control measures are implemented, the residual potential air quality impacts from dust generated by construction, earthworks and trackout activities was predicted to be **not significant**. The dispersion modelling results indicated that annual mean NO2 and PM10 concentrations across the application site were below the relevant AQOs. The location is therefore considered suitable for the proposed end-use without the implementation of protective mitigation techniques. Predicted impacts on annual mean NO2, PM10 and PM2.5 concentrations as a result of operational phase exhaust emissions were predicted to be **negligible**. The overall significance of potential impacts was determined to be **not significant**.
		Cultural Heritage	Two non-designated heritage assets have been identified within the study site, a former Post Medieval field boundary which is now only visible as a bank on LiDAR imagery, and a record of two Post-Medieval former structures; although only one, a probable smithy, is mapped as being within the study site. Field names of archaeological interest within the study site include ‘Barn Field’ and ‘Barn Croft’ which indicate the potential for archaeological remains of barns to be within these fields. Any archaeological evidence of these **structures would be of significance** if it has potential to contribute to local and regional research agendas.
		Ecology	Development at the site will provide an opportunity to secure ecological enhancement for fauna typically associated with residential areas such as breeding birds and roosting bats and the positive management of retained and created habitats in accordance with conservation objectives.

ID	Application Number	Topic	Summary of available environmental assessments
		Landscape	Residual effects on the Coastal Plain Landscape Character Area would be **negligible**, local, long term, permanent. There would be **negligible**, local, long term, permanent effects on the landscape character within the immediate locality upon maturity of the proposals. There would be minor beneficial, local, long term, permanent effects on the landscape features within the site due to the retention and enhancement of existing trees and hedgerows and proposed planting. Potential landscape effects would be confined to the site itself and the immediate local area. Views of the proposed development would be experienced from PRoW 6-10 FP93 which runs through the site resulting in **moderate adverse**, long-term, permanent visual effects. There would be some **minor adverse-negligible**, long term, permanent visual effects for those using a short stretch of the PRoW 6-10 PF84, directly north of the site. Effects on the views from other PRoW located to the north and which cross the motorway would be negligible upon maturity of the landscape. There would be **moderate-minor adverse**, long term, permanent visual effects on the views from Sandy Lane as a result of the proposed development. There would be **minor adverse**, long term, permanent visual effects on the views from Tabley Lane. These changes would reasonably be anticipated as part of the delivery of the NW Preston Masterplan.
30	06/2020/1344	**Air Quality**	Potential construction phase air quality impacts from fugitive dust emissions as a result of earthworks, construction and track out activities were assessed. It is considered that the use of good practice control measures would provide suitable mitigation for a development of this size and nature and reduce potential impacts to an acceptable level. Potential impacts during the operational phase of the proposals may occur due to road traffic exhaust emissions associated with vehicles travelling to and from the site. Predicted air quality impacts as a result of traffic generated by the development were **not significant** at any sensitive location in the vicinity of the site.

ID	Application Number	Topic	Summary of available environmental assessments
		Ecology	**Habitat** Priority Habitat hedgerows exist on site. The habitat status, habitat connectivity function and value of the hedgerows for fauna such as foraging bats and nesting birds is recognised. Recommendations for the retention and protection of the hedgerows and for supplementary planting and planting of new hedgerows to compensate for any unavoidable hedgerow removal has been provided. The removal of 165 metres of hedgerow and sections of another hedgerow is unavoidable to accommodate the relevant visibility splays and road accesses. This is an identified impact of the proposals, however, compensatory linear planting of native species is entirely feasible and will be accommodated by the proposals. **Bats** The retention and conservation of the hedgerows and site boundary features, where possible, will conserve opportunities at the site for the attraction of foraging bats. The retention of these features with an appropriate buffer and the appropriate use of lighting at the developed site will avoid the degradation of habitats and any significant adverse effect on opportunities for foraging bats. In addition the built development will secure the opportunity for the creation of provisions for roosting bats. **Nesting Birds** The broadleaved trees, shrubs and hedgerows provide favourable foraging and nesting habitat for some of the species of birds detected within the site and the wider area via the records search (including Priority Species). Subject to the grazing / cutting regime and the proximity to the overhead lines, some of fields of improved grassland within the site provides opportunities for ground nesting birds, such as lapwing and curlew, both Priority Species. Development of the site will result in the permanent loss of the availability of habitat for use by nesting lapwing and curlew. This is an identified potential impact. Opportunities for these species are present in the fields to the north of the site and it is considered unlikely that the species will be displaced entirely from the local area.

ID	Application Number	Topic	Summary of available environmental assessments
			Mandatory actions to protect nesting birds during site clearance and measures to provide compensatory opportunities for nesting birds, particularly passerine species, including Priority Species and species in decline such as swift are required. Best practice measures, including Reasonable Avoidance Measures (RAMs) for the protection of amphibians and other wildlife, to ensure the ecological assessment remains valid and relevant are appropriate.. Appropriate survey effort and / or assessment in accordance with standard survey guidance, has been carried out to reasonably discount adverse effects on other relevant protected species namely badger, water vole, otter and reptile species.
		Water	The site is located within Flood Zone 1 with a low probability of flooding. The development site is at a low risk of flooding from other sources.
		Noise	With regards to road traffic using the M55 motorway, compliance with the adopted external noise criteria can be achieved without any noise mitigation measures and with regards to internal noise levels. The noise climate at the Site can be adequately controlled by means of noise mitigation measures to meet noise criteria limits at the proposed dwellings and is therefore considered to be sufficiently low enough to accord with the '**No Observed Effect Level'** as detailed in the PPG and, as such, noise should not be deemed to be a determining factor in the granting of planning permission for this Site.
		Traffic and Transport	An assessment of the proposed Phase 1 development has demonstrated that trip generation will have no material traffic impact on the local highway network.

ID	Application Number	Topic	Summary of available environmental assessments
31	06/2020/0652	**Air Quality**	Potential construction phase air quality impacts from fugitive dust emissions were assessed as a result of earthworks, construction and trackout activities. It is considered that the use of good practice control measures would provide suitable mitigation for a development of this size and nature and reduce potential impacts to an acceptable level. The dispersion modelling results indicated that annual mean pollutant levels across the application site were below the relevant air quality objectives. The location is therefore considered suitable for the proposed end-use without the implementation of protective mitigation techniques.
		Ecology	**Bats:** A proposal to construct residential dwellings across the site would include a means of access, driveways and associated infrastructure which will impact on the bat use on the site. However, the site use is limited to occasional foraging and the majority of records bat activity was off the northern boundary and along the canal. There is limited potential for bat roosts on site.
28	06/2021/1414	**Traffic and Transport**	It has been demonstrated that the impact of the proposals on the local highway network would not be material.
		Noise	The assessment shows that with appropriate consideration to noise mitigation measures an appropriate level of protection could be afforded to future noise sensitive receptors on the site.

ID	Application Number	Topic	Summary of available environmental assessments
		Ecology	**GCN:** The nearest ponds with confirmed Great Crested Newt populations referenced as are located approximately 300 metres south and west of the site boundaries. Both ponds had confirmed 'small' populations during the 2015 surveys but were considered to be 'Likely absent' following the 2018 surveys. This suggests metapopulations and ponds within the vicinity of the site have reduced in suitability and are unlikely to have Great Crested Newt present. **Bats:** It is likely that bats use the hedgerows and trees as foraging habitat. **Badger:** No Badger sett was located on the site or immediately adjacent to the site. **Nesting Birds:** The site supports suitable nesting habitats for passerine birds within the tree and hedgerow habitats. It is considered the site offers sub-optimal habitat for ground.
		Air Quality Assessment	With the implementation of these mitigation measures the impact of construction phase dust emissions was considered to be **'not significant'** in accordance with Institute of Air Quality Management guidance. Pollutant concentrations across the Site were predicted to be below the relevant air quality objectives and the Site was therefore considered suitable for the proposed use with regard to air quality.

ID	Application Number	Topic	Summary of available environmental assessments
25	06/2015/0868 06/2014/0352 06/2012/0822	N/A	N/A
13	06/2011/0473 06/2017/1384 06/2016/1035 06/2019/0585	**Ecology**	**Bats:** Evidence of foraging and commuting. Absence of roosting bats from the buildings and trees impacted upon by the proposed development. **Breeding birds:** Lapwing and mistle thrush are of district value and breeding territories were found on the site. Evidence of the following species of parish value were also found on the site: dunnock, house sparrow, linnet, swallow, song thrush and whitethroat. **GCN:** No great crested newts were recorded on the site during the surveys. Impacts considered are those relating to loss and fragmentation of habitats and disturbance, both during construction and operational phases. **Impacts:** Impacts considered are those relating to loss and fragmentation of habitats and disturbance, both during construction and operational phases.
		Landscape	The visual effects of the completed development will range from **moderate adverse – moderate beneficial.** Proposed new planting will more than compensate for the loss of any vegetation. The enhancement of vegetation is considered to be **moderate beneficial.** The retention of existing field boundary hedges, trees and the pond all provide a mature setting for the green infrastructure within the site. The effect of the change to the existing landscape

ID	Application Number	Topic	Summary of available environmental assessments
			character is considered to be slight – **moderate adverse.** The visual effects of the completed development will range from moderate adverse – **moderate beneficial.**
		Soils and Geology	The agricultural land quality has been assessed and it has been determined that there is a mixture of sub grade 3b and sub grade 4 land at the application site. The loss of this land is considered to be **insignificant.** Construction of the proposed development would have to be carefully controlled as it has the potential to result in effects on the underlying principal aquifer and groundwater Source Protection Zone and to release contaminants (via the unnamed watercourse within the site boundary) into Savick Brook. It is assessed that there is **limited potential for contamination** and where contamination is possible it is likely to be **localised.** Where contamination potential exists, mitigation by application of appropriate site management controls will ensure that there will be **no significant effects.**
		Materials and Waste	Waste generated during operation of the proposed development is predicted to be **negligible.**
		Noise	During operation increase in traffic flows on road surrounding the site will predominantly result in a **negligible noise increase.** A small number of dwellings on Tabley Lane will experience a small increase in noise levels resulting in a **minor adverse effect.** During the operation of the proposed development there is a predicted noise impact on an area of open space and proposed dwellings adjacent to the Landorn Boarding Kennels and Cattery. To mitigate any impacts a noise bund is proposed which will serve to reduce the impact of dog barking noise.
		Air Quality	The main potential source of atmospheric pollutants resulting from the operation of the proposed development is emissions from vehicles travelling to and from the site. The air quality assessment concluded that the significance of the predicted change in air quality as a result of

ID	Application Number	Topic	Summary of available environmental assessments
			the development proposal is **not considered to be significant.** The main potential source of atmospheric pollutants resulting from the operation of the proposed development is emissions from vehicles travelling to and from the site. The assessment has concluded that the significance of the predicted change in air quality as a result of the development proposal is not considered to be significant.
		Water	The development proposals incorporate a number of flood risk mitigation measures which will provide a number of long-term beneficial effects relative to the existing situation. A surface water drainage system, including de-culverting the existing unnamed watercourse, has been designed which will reduce surface water runoff from the site and downstream. The operational effect of the proposed development is considered to be minor-moderate beneficial.
		Socioeconomic effects	The socio-economic effects of the completed development will be beneficial after contributions to the enhancement of GP offices in the area and it is predicted that an increase in local spending and economic activity. It is estimated that approximately £5.7m of household expenditure would be generated in the local economy. This could be expected to support approximately 70 new jobs in Preston. In addition, uplift in the council tax revenue base would be expected to generate approximately £4.2m revenue per annum.
		Traffic and Transport	Any vehicular impact as part of the development of the Haydock Grange site can be accommodated and in tandem with the Residential Travel Plan framework which will be developed into the final Travel Plan, will provide a highly sustainable development whilst benefiting the wider community in and around the Higher Bartle area. The transport implications and highways improvements proposed as part of the development, it is considered that the proposed residential development meets the aims of planning policy, whilst minimising the need to travel and ensuring continued capacity on the adjacent highway network.
3	06/2015/0530	**Ecology**	The development will result in the loss of some hedgerows some of which are species rich, and a dry pond. The site is not used by roosting bats and only used for foraging purposes. The site is used for

ID	Application Number	Topic	Summary of available environmental assessments
			this purpose by the common and widespread common pipistrelle bats and the widespread but uncommon species Myotis species bats in much lower numbers. There is a good breeding bird assemblage considered to be of a district value. The farmland is currently used by small number of brown hare.
		Landscape and Visual	The development would improve connectivity and public access to the countryside with existing footpaths retained and improved where they cross the site allowing local residents and visitors improved connections to the local countryside. Existing hedgerows and hedgerow trees have been retained where possible and create a framework for these proposals. Site and field boundary planting is strengthened. Any tree losses would be replaced with a greater level of broad leaved trees around the periphery and across the site. In addition to this further hedgerow, tree and shrub planting is proposed within the proposed development. This will include extensive planting of street trees, trees planting to proposed squares and incidental open spaces, suds planting and hedgerow corridor planting to the edges of the site. In terms of topography and context, the naturalistic nature of the proposals and the lack of change to the fabric of the landscape beyond and to the immediate site boundaries result in a relatively low magnitude of change to the site. The development is 2 storeys in height. Roofs are pitched and buildings are proposed to decrease in height as they abut edges of the site mitigating impact however key public views from Hoyles Lane and Sidgreaves Lane are obscured.
		Waste management	The Proposed Development is not expected to result in a significant quantity of excavation material as the majority of clean excavated material will be reused on-site. This will result in a **minor negative medium-term** residual effect. The Proposed Development will include appropriate internal and external waste storage areas. The Proposed Development will result in the generation of household waste from the new community. This is likely to comprise a negligible residual effect on off-site waste treatment and

ID	Application Number	Topic	Summary of available environmental assessments
			disposal facilities for household waste in the long-term.
		Traffic and Transport	All magnitude of impacts are identified as **negligible adverse** on the surrounding transport network apart from on Sidgreaves Lane, Hoyles Lane and Cottam Way where the magnitude of impact before mitigation is **moderate adverse**.
		Noise	Noise effects remain as **minor negative** to moderate negative when works are at their closest approach to existing and proposed (earlier Phase) properties. Such effects will be temporary in nature, for the majority of the works when construction activities are more remote from existing residential properties the adverse effect will be more **minor negative**. The change in noise level from predicted road traffic increases on all surrounding links is assessed as **minor negative** at most.
		Air Quality	During the construction phase, there might be occasions when visible dust or trackout is observed in the vicinity of the site, but it should be infrequent and limited to the duration of the construction phases. An effective execution of standard dust control measures will be able to prevent significant detrimental impacts of construction dust on nearby residential properties Perceptible changes in nitrogen dioxide (NO2) concentrations have been predicted for some residential properties close to the site along Sidgreaves Lane and Hoyles Lane. However, the users of these properties will still be able to enjoy local ambient air quality where the levels of both nitrogen dioxide (NO2) and particulate matter (PM10) within the national air quality objective values, which have been set by the Government for the protection of human health.
		Soils and geology	Based on the history and geo-environmental setting of the site and surrounding area, significant widespread contamination is not anticipated at the site. Identified potential sources of contamination include the presence of made ground in the infilled ponds (potentially resulting in localised ground contamination and ground gas generation) and the possible use of pesticides, herbicides etc. associated with agricultural activities at the site. A number of potential effects have been identified associated with the site and its proposed development. The receptors of these effects include site workers and future site occupants,

ID	Application Number	Topic	Summary of available environmental assessments
			surface water, groundwater and neighbouring properties/residents. In a number of instances, potential substantial adverse effects have been identified, although in all instances these could be readily mitigated. Following mitigation, all residual effects are classified as being **negligible**.
		Socioeconomic effects	In assessing the effects of the Hoyles Lane scheme, the chapter on socio-economic effects has demonstrated that the redevelopment of the site will be predominantly positive, bringing both **major and minor beneficial impacts** to the economy, the local community and the environment.
		Water	Following implementation of the mitigation measure, proposals are therefore expected to have an overall **moderate beneficial effect** on flood risk, surface water drainage and foul drainage.
		Cultural Heritage	Taking into account the proposed mitigation, it is considered that the scheme will fully comply with national and local planning policy and guidance, as this relates to the historic environment.
0	06/2017/0324 06/2012/0145 06/2019/0114 06/2015/0243 06/2016/0046	**Water**	The Impact Assessment identifies that at worse there are only **minor adverse impacts** of flood risk.
		Soils and Geology	The development of the proposed scheme, with appropriate mitigation measures, is assessed as having a neutral effect on the environment with regards to contaminated land. The operation of the development is assessed as having a **neutral or minor beneficial** effect on the environment with regards to contaminated land.
		Air Quality	Concentrations are expected to remain well below AQS objectives with and without the development, the overall effect on air quality is considered to be **'negligible'**.
		Ecology	Results of the desktop survey identified the following species of conservation concern within the study area: ▪ Great crested newt Triturus cristatus (European Protected Species, UKBAP, LBAP)

ID	Application Number	Topic	Summary of available environmental assessments
			▪ Common frog Rana temporaria (LBAP) ▪ Pipistrelle bat Pipistrellus pipistrellus (EPS, LBAP) ▪ Brown hare Lepus europaeus (UKBAP, LBAP) The presence of great crested newts within the Site has also been identified from TEP's yearly surveys of the water bodies at Cottam, in addition to common frog, common toad (UKBAP species) and smooth newt. The closest bat record held by South Lancashire Bat Group (SLBG) is a pipistrelle casualty record (1998) approximately 3km southeast of the site. The closest roost record is for common pipistrelle (2007) 4km south of Cottam.
		Traffic and Transport	Forecast operational development traffic flows will have a slight impact on Lea Road. To reinforce the assumed distribution of traffic, mitigation is proposed to reinforce this level of impact, and discourage additional traffic from using Lea Road.
		Landscape and Visual	It is recognised that the proposed development would result in considerable changes in massing, scale and proportion across the Site, which would lead to a loss to the sense of openness created by the existing agricultural fields. The predicted impact significance on visual receptors ranges from **neutral to moderate adverse**.
		Socio economic	The socio-economic assessment has not identified any negative impacts associated with the proposals.
2	06/2017/0366	**Air Quality**	The effects are **not predicted to be significant** with respect to air quality with no significant residual effects.

ID	Application Number	Topic	Summary of available environmental assessments
	06/2016/0291	**Noise**	The assessment has found that some traffic noise mitigation measures will be necessary for certain parts of the residential development, particularly those that will be nearest to the new link road. With the implementation of noise mitigation measures it is concluded that acceptable noise levels will be achieved inside the proposed houses and in rear gardens, as defined in BS8233:2014.
		Ecology	**Bats** 41 trees within the site support features suitable for use by roosting bats. Habitats within and adjacent to the site are suitable for foraging and commuting bats. **Breeding Birds** Curlew, House Sparrow, Dunnock, Song Thrush, Lapwing were sighted during the breeding bird survey. All are UKBAP priority species. All showed signs of breeding on site with the exception of the house sparrow. **Great Crested Newt** No Great Crested Newt were detected during any of the surveys. No Great Crested Newt were detected at any ponds within 500 metres of the site; the presence of Great Crested Newt at the site is reasonably discounted and no further survey is required. A small population size class (1 to 10) of Smooth Newt was detected at Pond 2. No Palmate Newts were detected during the survey. Breeding Common Frog and Common Toad (as confirmed by the presence of tadpoles) were detected at Ponds 2, 17 and 18. Adult Common Frog were detected at Pond 18. No adult Common Toad were detected during the survey. Fish were detected at Ponds 2 and 17. Common Toad, a UK BAP Priority Species, were detected
		Soils and Geology	**Agricultural Land Classification** Both of these surveys confirmed that all agricultural land was ALC Grade 3b quality. The

ID	Application Number	Topic	Summary of available environmental assessments
			development would result in the loss of ALC Grade 3b quality soils.
		Landscape	The development will change the character of the area, with a loss of open, rural, land and its replacement with residential housing. As such the overall magnitude of the visual impact on the landscape will be **Medium Adverse.**
33	LCC/2016/0046	**Air Quality**	The scheme will result in beneficial impacts within the Air Quality Management Areas designated by Preston City Council and South Ribble Borough Council. Locally, there would be no significant impacts on air quality due to the improvements in traffic flow and increases to local highway capacity as a result of the scheme.
		Noise and Vibration	Overall, with the proposed scheme in place the vast majority of dwellings will experience no change or negligible impacts in relation to noise and vibration levels. A small number of properties near Preston Western Distributor could experience major or moderate adverse noise impacts during operation. However these can be reduced with appropriate monitoring and controls to be agreed with the Local Authority. None of the levels exceed the fixed recommended limits for rural, suburban or urban areas.
		Landscape and Visual Impact	Extensive landscaping and habitat creation will be a critical part of the scheme to mitigate for any adverse landscape, visual and ecology impacts and to screen the road from local residents and receptors. As a result of the landscaping mitigation for the scheme, there will be a net gain in habitat within the survey area and the species planted will be of a superior quality to the existing baseline conditions.
		Ecology	The scheme operation at opening year would have a moderate adverse impact on two features at County level (Bartle Wetland Biological Heritage Site and the loss of eight veteran trees). The significant adverse effects of the scheme include: ▪ Scheme construction would result in a small overall permanent loss of 2433m^2 of

ID	Application Number	Topic	Summary of available environmental assessments
			woodland; ▪ Scheme construction would result in an overall permanent loss of 625m^2 of semi-natural broad-leaved; and, ▪ Scheme construction would result in an overall loss of 7,223m of hedgerow. **Breeding Birds** For the majority of the bird species recorded in close proximity to the scheme, any disturbance impacts during operation, including any cumulative effects are unlikely to result in significant changes to population levels within the survey area in the long term. These effects are therefore considered to be **not significant**. **Wintering birds** For the wintering bird species recorded within the likely Zone of Influence for disturbance impacts during operation (including any cumulative effects) are unlikely to result in significant changes to population levels within the survey area in the longer term and the majority of birds using these habitats would be effectively displaced into surrounding habitats. These effects are therefore considered to be not significant. **Barn Owl** The operation of the scheme has the potential to significantly affect the local barn owl population through increases in mortality rates from road traffic collision, severance of roosting and breeding sites from key foraging areas and roost abandonment from disturbance. These impacts are therefore considered to be significant in respect of barn owl. **Bats**

ID	Application Number	Topic	Summary of available environmental assessments
			Significant adverse impacts predicted from the operation of the scheme are predicated on common pipistrelles, myotis bat species and brown long eared bats. **Brown Hare** The likely operation impacts on brown hare during operation i.e. disturbance, severance and fragmentation effects mortality, is therefore anticipated to be **significant.** **Hedgehog** It is likely that operational impacts on hedgehogs due to mortality, severance and fragmentation would be **significant.** **GCN** There would be a loss of one breeding pond which currently supports a small population of GCN and which is considered to be part of a medium metapopulation. Terrestrial habitat losses would also occur to eight ponds with small GCN populations. There is also a risk of mortality to GCN during construction. The scheme effects during construction are assessed as being **significant.** **Common Toad** Toads are likely to be subject to significant severance impacts, particularly in high risk areas which support optimal toad habitat, such as around Bartle Wetland and Bartle Hall. Toad mortality is also likely to increase. The scheme effects during operation are assessed as being significant.
		Water resources	Overall, the impact of the scheme on water quality would be neutral. The only slight adverse impact would be on water quality at two Savick Brook tributaries, but impacts will be localised and are not considered to be significant.
		Soils and Geology	With mitigation in place, no significant impacts on soils, geology and hydrogeology are predicted.
		Traffic and Transport	Overall, the local traffic network would see a significant beneficial impact as a result of the scheme as there will be a net reduction in flows on the existing network across North West Preston with reductions extending to Kirkham and M55 junction 3 and to the A583 Blackpool

ID	Application Number	Topic	Summary of available environmental assessments
			Road. There will also be flow reductions on the A6 and on approaches to the M55 Junction 1 at Broughton. A number of local roads surrounding the scheme would experience a reduction in traffic flow of 30% or greater in both the AM and PM peak periods.
		Land use and accessibility	The proposed scheme would result in short term disruption due to temporary Public Rights of Way and cycle route closures and diversions. However during operation, the scheme would bring a number of benefits. Benefits include: ▪ A new separated shared use cycleway and footway; ▪ Quieter local roads; and, ▪ Provision of a green park; The scheme would result in temporary and permanent loss of agricultural land with reduced access to the remaining land.
6	06/2017/0255 06/2009/0499	**Ecology**	**GCN** A **major negative impact** will be Great Crested Newt and other amphibian casualties if they enter the Superstore and car-parking areas **Breeding Birds:** There will be **moderate and negative impacts** on birds and other sensitive wildlife using the Local Nature Reserve because of the movements of traffic **Bats:** Lighting and noise within the Superstore car park and access road will have **moderate and negative impacts** on bats, small mammals, birds and other wildlife using the Local Nature

ID	Application Number	Topic	Summary of available environmental assessments
			Reserve. **Habitat:** Increased use of the Local Nature Reserve by visitors will have **moderate and negative impacts** on plants due to trampling and on birds and other wildlife due to disturbance. Increased use of the Lancaster Canal following marina construction will also have a **moderate and negative impact** on the canal including its aquatic flora due to increased turbidity and physical effects on waterside vegetation as a result of boat movements. The birdlife associated with the canal and its margins will also be disturbed by increased boat traffic. Another **moderate negative impact** will be a reduction in habitat connectivity with the habitats of the surrounding area, particularly the Lancaster Canal and associated canal-side vegetation. However, this impact will affect mobile species, notably birds, bats, dragonflies and butterflies to a minor extent only. The other negative operational impacts will be **neutral to minor**. These minor and negative impacts include predation and disturbance to wildlife caused by domestic pets, and increased risk of fish introductions to the ponds. Fish introductions have often adversely affected ponds in urban or suburban areas.
		Soil and Geology	Due to the sites previous industrial usage as a brick works, and in part, a landfill, soil, gas and groundwater contamination has been identified on the site which could affect environmental, construction and human receptors, both on and adjacent to the site. Future development of the site will require remedial measures to be implemented both during preparatory earthworks and within the built development in order to mitigate risks to identified receptors to acceptable levels.
		Air Quality	After implementation of appropriate mitigation in the operation phase (such as delivery vehicles complying with EURO standards, setting up car-share schemes for staff etc) the development is predicted to have minor adverse impacts on annual mean NO2 concentrations at small number of properties (although no exceedances of the national air quality objective is predicted); and no

ID	Application Number	Topic	Summary of available environmental assessments
			significant impact on annual mean PM10 concentrations.
		Water and hydrology	The water quality of the Savick Brook just downstream of the site indicates that the Environment Agency River Chemistry is classed as Good but the River Biology is classed as Bad. The chemical quality of the water has improved over the last 5 years and the biology of the watercourse has responded only slowly to improvements in water quality. Several protected species associated with the water environment have been recorded within a kilometre of the site. The development of the Cottam Hall Brickworks site must not negatively impact on the water quality downstream, which is currently classified as Good. Initial ground testing indicates that there is a risk of mobilisation of contaminants that could cause diffuse pollution runoff. Therefore oil and pollution interceptors would also be provided on inlet channels feeding the features. The intended result is an improved drainage system that safeguards existing sensitive watercourses from the potential impacts associated with polluted road related runoff and any potential accidental spillages.
		Noise and Vibration	The noise impact on existing receptors would be **negligible** from store car parking activity. The impact of noise from store car parking activity on the proposed residential buildings would be within guideline values. Therefore, the impact is assessed to be **negligible**. The impact of noise from servicing activity on existing receptors would comply with guideline values and be of **negligible** impact at any time. The impact of noise from servicing activity on proposed receptors would be very well screened from the unloading area by the store building itself and well within guideline values at all times, thus of **negligible** impact. The impact of noise from the petrol filling station would be very low at the nearest receptors and well within guideline values during the day and at night, and thus of **negligible** impact. The impact of noise from office uses on the development will be insignificant and of **negligible** impact.

ID	Application Number	Topic	Summary of available environmental assessments
			The impact of noise from leisure uses is unlikely to be an issue. There is potential for amplified music to feature in some uses, however, leading to a **moderate** impact if uncontrolled. The impact of noise from road traffic from customer vehicles the proposed development would make an imperceptible change in noise associated with road traffic and would therefore be of **negligible** impact.
		Traffic and Transport	It is considered that the measures outlined above, together with the Travel Plan, will assist in improving conditions for those travelling to/ from the site by non-car modes, most notably pedestrians and cyclists, with the overall significance of the impact of the development on traffic flows being **minor adverse and permanent.**
7	06/2017/0256	**Traffic and Transport**	This report has identified that the development is located to provide access to a range of sustainable transport modes. An internal movement network capable of accommodating all modes of transport all modes is identified to maximise the opportunity for journeys on foot, bicycle and public transport. There will be no severe impacts as a result of the development on the safe and efficient operation of the existing road network.
		Noise	Internal and external noise levels are acceptable but it is required that mitigation fencing and boundaries are constructed.
24	06/2020/0888	**Air Quality**	The impact description of the effects of changes in traffic flow as a result of the proposed development, with respect to NO2, PM10 and PM2.5 exposure, is determined to be 'negligible' at all existing receptors.
		Ecology	**GCN and amphibians:** A single pond on site supports GCNs and the site supports common toad and common frog and contains suitable breeding, foraging and sheltering or hibernation opportunities. **Bats:** Five species of bat, with Daubenton's bats observed foraging over the ponds within Bartle Wetlands BHS.

ID	Application Number	Topic	Summary of available environmental assessments
			Breeding birds The habitats on site present a number of opportunities for a range of foraging and nesting bird species, with areas of dense scrub, woodland, hedgerows, ponds, swamp and marginal habitats. The habitats also present some, albeit limited suitability for overwintering waterfowl, with relatively short, improved grassland and associated aquatic habitats. New residents from the proposed development have the potential to visit the Ribble & Alt Estuaries SPA and Ramsar sites, resulting in additional recreational pressure. Increased recreational pressure can have a severe adverse impact upon the wetland bird species and assemblages using the site and for which the SPA and Ramsar sites are designated for. This impact is considered to be of a medium magnitude at a European level, therefore it is of **'Critical Significance'.** Roadside gully pots could trap amphibians and result in their eventual death if no means of escape are provided or if they are allowed to fall in. This would be a reversible impact but would be permanent and an ongoing issue until rectified. It is considered to be a high magnitude impact at site level, therefore it is of **'Minor Significance'.** Inappropriate external lighting could deter some light-sensitive bats species from using parts of the site for foraging, commuting or roosting purposes. This is a reversible but negative impact of a medium magnitude, and the impact could continue throughout the lifespan of the residential estate. This impact is considered to be a medium magnitude impact at a local level, therefore it is of **'Minor Significance'.** There will be a loss of improved grassland and field margin habitats which appear to be in use by a low number of hedgehogs. However, these will be replaced by residential areas with associated amenity gardens, which can still support good numbers of hedgehogs. If there are no gaps / access points between garden boundary fences, this would also lead to fragmented and isolated areas, which would have a more permanent impact on hedgehog movements throughout the local area. This would be a low magnitude impact at a local level, therefore it is of **'Minor Significance'.**

ID	Application Number	Topic	Summary of available environmental assessments
			Given all mitigation measures, best practice documentation and polices are followed the residual impacts have been assessed **as 'Neutral, Minor Positive or Moderate Positive'**. However, it has been identified that after mitigation, there is potential for there to be a **'Minor Negative'** impact on brown hares based on the amount of habitat loss and dispersal which is unavoidable; it should be noted that the surrounding area presents a large amount of similar suitable habitats; this is a **minor impact.**
		Water and Hydrology	Spillages of oil or diesel may occur during the operation phase of the development and will mainly be associated with Heavy Goods Vehicles, normal vehicle usage and general activities onsite. If a spillage was to occur contaminants may enter the watercourse and has an assessed impact of **'Major Adverse'.** A reduction in infiltration due to the increase in impermeable area, and in turn the associated increase in surface water runoff rates and volumes will be mitigated through a detailed surface water drainage strategy. Therefore, the assessed impact of **'Minor Beneficial'** With the appropriate site assessment, all other impacts are predicted the residual impact is assessed to be **'Negligible'**.
		Noise	The predicted change in traffic noise levels at all receptors is no more than 0.5 dB(A). The magnitude of impact is assessed as being **'Negligible'**, and therefore the effect will **not be 'Significant'**. The recommended WHO/BS 8233 internal noise levels are generally exceeded across the site during the daytime and night-time, assuming a windows-closed scenario at properties immediately adjacent to the M55, PWDR, Rosemary Lane, Lea Lane and Bartle Lane. The magnitude of impact is assessed as being **'Major'**, and therefore the effect will be **'Significant'** without any mitigation. Including the proposed mitigation, the magnitude of the impact on proposed residential receptors is assessed as being **'Minor'**, and therefore the effect will be **'Not Significant'**.
		Soils and	In terms of impacts upon human health, notably to site workers and site users, unmitigated risks are posed from the sites past agricultural use and imported soil, site soils and ground gases. The

ID	Application Number	Topic	Summary of available environmental assessments
		Geology	overall assessed risk is **'Moderate'**. The limited contamination anticipated onsite and the sites geology of low permeability Glacial Till it is anticipated that there will be limited vertical movement of potential contaminants into the groundwater and has an overall assessed risk of 'Low'. In terms of Surface waters, given significant contamination is not anticipated an overall assessed risk of **'Low'** is identified. The risk to ecology and wildlife, based on the nature and distance of the site from any areas of environmental sensitivity and the low level of contamination anticipated onsite the overall potential risk is assessed at **'Low'**. The risk to the built environment assumes that a risk is present from imported fill which may impact on building materials and water supply pipes. There may also be a risk from existing contaminated soils associated with the farm and outbuildings, and a risk of damage by explosion of ground gases. Therefore an overall potential assed risk of **'Low-Moderate'** is identified. Due to the loss of agricultural land during the construction/ operation of the development it is considered to be a substantial scale of change which will have a major permanent effect and has an assessed risk of **'High'**. The operational phase residual effect, post mitigation, has been identified as being **'Moderate Adverse'**.
		Traffic and Transport	Not quantified at this stage
31	06/2020/0652	**Air Quality**	The dispersion modelling results indicated that annual mean pollutant levels across the application site were below the relevant air quality objectives. The location is therefore considered suitable for the proposed end-use without the implementation of protective mitigation techniques.
		Ecology	Bats were found to be commuting and feeding on the site which was attributed to Common Pipistrelle species. The numbers of bats recorded (largely 1/2 animals at any one time) suggests a small local bat population.

ID	Application Number	Topic	Summary of available environmental assessments
		Noise	The Noise Impact Assessment has determined that with mitigation measures in place, the NOAEL with noise being noticeable and not intrusive and with the following advice: “Noise can be heard but does not cause any change in behaviour or attitude. Can slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life.” This assessment has shown that, in principle, there should be **no adverse impact** at the closest receptors as a result of the existing noise sources.
		Traffic and Transport	The proposals will not have a material impact on the local highway network.
29	06/2019/1451	**Air Quality**	Potential construction phase air quality impacts from fugitive dust emissions were assessed as a result of earthworks, construction and trackout activities. It is considered that the use of good practice control measures would provide suitable mitigation for a development of this size and nature and reduce potential impacts to an acceptable level. Air quality impacts as a result of traffic generated by the development were **not significant** at any sensitive location in the vicinity of the site.
		Ecology	No rare or uncommon plant species have been detected. No Priority Habitat or semi-natural habitat is present at the site. Great crested newt and associated amphibians have been translocated off site. Vegetation at the site is suitable for use by nesting birds, including ground nesting birds (lapwing). Mandatory actions in relation to the protection of nesting birds and recommendations for the creation of opportunities for nesting birds as part of the proposals are given. **No adverse effects** on protected species.
		Noise	During sensitive night-time hours, calculations indicate levels are closest to the region specified as an ‘indication of the sound source having a low impact’, with operations and mitigation as currently proposed for existing and proposed offsite receivers.

ID	Application Number	Topic	Summary of available environmental assessments
			Currently proposed operations on the detailed application are therefore considered suitable as proposed. For the outline application (all other Units), calculated noise levels assume that a noise management plan will be as follows as specified in this assessment. Additional mitigation in the form of screening and restrictions to certain units have also been proposed.
		Flood risk and drainage	The site is located entirely within Environment Agency Flood Zone 1 and is therefore at very low risk of flooding from fluvial sources. The site is not at risk of coastal and high tide flooding as it is not located near/adjacent to the coast. The majority of the site is considered to be at low risk of groundwater flooding, however localised areas of the site may be subject to groundwater flooding during extreme storm events. The land to the north is mainly under hard cover as existing built development. As such, surface water will be discharged via an installed drainage system and is unlikely to generate surface water runoff. The land to the south is mainly under soft cover which generally slopes away from the site. As such, uncontrolled surface water runoff generated in this area is unlikely to affect the site. The land to the east and west is mainly soft cover which slopes towards the site. As such, uncontrolled surface water runoff generated in these areas may affect the site. If adjacent sewers and/or proposed site drainage were to become blocked and/or overloaded in the event of flooding due to extreme storm events, then overland flow from sewers and drains could occur.

17.5 Impacts – Construction

17.5.1 The impacts during construction of all topics covered in the relevant assessments across the shortlisted developments are generally thought to be transient in nature and adequately managed through the appropriate construction management plans, good practice and control measures with the exception of land use change.

17.5.2 Land use change takes place during construction where stockpiles of materials, tracks and movable plant are stored or mobile for the period of construction. The effects of this are sought to be minimised by the developers and the land then later becomes permanent land take during the operation of the scheme in the form of residential development. As the wider development of North West Preston is something that was stated in the Preston Local Plan (Allocation MD2), the changes in land use in the area are expected and in keeping with the development of the local area.

17.6 Impacts - Operation

Air Quality

17.6.1 Regarding the impact of air quality on human receptors, there is unlikely to be inter-project cumulative effects beyond those considered in Chapter 8 'Air Quality'.

17.6.2 The road traffic flows associated with the Preston Western Distributor Road (PWDR) and other relevant committed developments were included within both the Do Minimum 2024 and Do Something 2024 scenarios (Chapter 14 'Traffic and Transport'). Therefore, the assessment of road traffic emissions during the operational phase includes the contribution from other development projects.

17.6.3 Any inter-project cumulative effects regarding nitrogen deposition at the Lancaster Canal BHS (e.g., combined impacts from the operation of the PWDR and the Scheme) are discussed in Chapter 6 'Ecology'.

Landscape

17.6.4 From the evidence presented in Table 17.3.5 and the information provided in Chapter 5 'Landscape and Visual Impact', the combination of predicted housing development associated with screening request 06/2020/1229 and the Scheme at construction would result in a major adverse significant cumulative effect on both The Fylde Landscape Character Area (15d) and Lea-Cottam Rural Fringe Local Landscape Character Area.

17.6.5 Residents at viewpoints identified in Chapter 5 'Landscape and Visual Impact' and users of the Lancaster Canal Long Distance Path would have direct, near distance views of the Scheme. There would be a resultant moderate adverse significant effect for residential receptors at these viewpoints and users of the NCR 62 and major adverse significant effect for users of the Lancaster Canal Long Distance Path at operation summer year 1.

17.6.6 The cumulative effect of the housing development at Lea Lane associated with planning application number 06/2020/1229 and the Scheme would result in a major adverse significant effect for the nearby residential viewpoints.

17.6.7 Walkers on PRoW would have filtered views of the completed railway station building and footbridge and canal bridge. There would be a slight adverse non-significant effect.

17.6.8 The cumulative effect on the housing development at Lea Lane associated with planning application number 06/2020/1229 and the Scheme would result in a moderate adverse significant effect.

17.6.9 By operation summer year 15 the planting in combination with the retained vegetation would have achieved sufficient height and density to screen and integrate the Scheme into the local landscape. Although some features such as lighting would remain visible above the canopy, the Scheme would be viewed within the context of the existing highway infrastructure of the adjacent PWDR, Cottam Link Road and the adjacent urban edge.

Ecology

17.6.10 Based on the evidence provided in Chapter 6 'Ecology' and the information provided in Table 17.3.5, adverse effects to statutory and non-designated sites are absent or negligible and so any contribution to a combined effect is considered inconsequential. As such, it is considered that the Scheme could not contribute significantly to any cumulative effects on designated sites.

17.6.11 The construction of the developments listed in Table 17.3.5 would result in a reduction of semi-natural habitat in Cottam when combined with the Scheme. Although dominated by habitats of limited ecological value, it is acknowledged that notable habitats including hedgerows and trees within these areas would be impacted.

17.6.12 Impacts to hedgerows and trees are the most common significant impact encountered across the developments. In relation to the Scheme, scattered trees, hedgerows and treelines are the only Important Ecological Features (habitats) for which without mitigation, impacts would be significant. Impacts to scattered trees would be significant at Local level and impacts to hedgerows and treelines will be significant at District level.

17.6.13 The cumulative impacts associated with the Scheme and these additional developments would increase impacts on these Important Ecological Features. However, the mitigation, compensation and enhancement measures, which would be included as part of these developments include an overall net increase of valuable ecological habitats. The assessed impacts for the Scheme would not be significantly worsened by these nearby

developments once new planting has had time to establish. Cumulative impacts to scattered trees, hedgerows and treelines would therefore be negligible.

17.6.14 The exception to this is the proposed residential developments associated with 06/2020/1229, as the plans (including committed ecological mitigation) are unknown. However, it is assumed that good practice mitigation measures would be adopted by this development and sensitive landscaping design would be applied (via legal obligations and planning control). Due to the proximity of these proposed developments to the Scheme, impacts from this development are the most likely to contribute to cumulative effects. Following a review of the habitats present within these proposed development areas, cumulative effects are only likely to extend to impacts on habitats already considered significant within this chapter (i.e., scattered trees, hedgerows and treelines) and it is considered unlikely that the cumulative effect would increase the levels of impacts already predicted. In addition, due to the low conservation value of habitats within the Scheme and the lack of a pathway for any significant impacts on other Important Ecological Features to occur (e.g. broadleaved woodlands), cumulative impacts to other habitats would be negligible.

17.6.15 In the absence of mitigation, cumulative impacts on certain protected/notable species would be significant (at the Local level or above). However, due to mitigation, compensation and enhancement measures included in the design of the developments noted in Table 17.3.5 for specific species and for wildlife and habitats in general, the assessed impacts for the Scheme would not be worsened by these nearby developments once new planting has had time to establish. Cumulative impacts to protected/notable species would therefore not be significant.

17.6.16 The exception to this is the impact of habitat loss in respect of brown hare. When considered alone, habitat loss from the Scheme is not considered to be significant due to the relatively small loss of land in consideration of the home range of brown hare, and the availability of suitable habitats in the

surrounding area. However, the combined habitat loss from the Land at Lea Road development amounts to approximately 16-18ha. This cumulative habitat loss will increase the level of impact and be significant for brown hare at the Local level.

17.6.17 Brown hare were recorded frequently within the Scheme and a 500m buffer area with one to four individuals recorded within the Scheme boundary and a peak count of 14. Brown hare inhabit agricultural and semi-natural habitats only. There is no feasible scope for the mitigation of these habitats within the Scheme.

17.6.18 Applications 06/2017/0324 and 06/2020/0888 also note a loss of habitat for brown hare as part of their developments. Therefore, the inter-project cumulative impact of the Scheme and its surrounding development on brown hare is like likely to be significant.

Materials and Waste

17.6.19 The impacts of the Scheme from a materials and waste standpoint are to be assessed in the post planning application stage of development. Considerations such as the quantity and origins of materials to be used in the construction of the Scheme and the management of waste materials will be assessed post planning in the Construction Environmental Management Plan.

Noise and Vibration

17.6.20 In terms of operational noise, there are unlikely to be inter-project cumulative effects beyond those already considered within Chapter 9 'Noise and Vibration'. For example, the road traffic flows associated with the PWDR and other relevant committed developments were included in all traffic scenarios assessed. Additionally, residential schemes that are not built at the time of writing but are likely to exist in the year of opening (2024), i.e. schemes with planning approval or that are under construction, have been included in the

assessment based on their planning application layouts. Therefore, the assessment of road traffic emissions during the operational phase includes the contribution from other projects.

Human Health

17.6.21 Largely, the cumulative socioeconomic effects of the Scheme have been assessed in Chapter 13 'Population and Human Health' and Table 17.3.5. No cumulative socioeconomic impacts have been identified for the Scheme.

Soils and Geology

17.6.22 It is unlikely that subsurface pollutants from historic land uses, and pollution incidents will become mobilised in a way that would cumulatively impact site users or other environmental receptors in the Scheme. Any large-scale earthworks would be required to take all reasonable precautions to manage any pollutants. As such, the risk of cumulative impacts regarding the Scheme are low.

Traffic and Transport

17.6.23 It has been identified that locally, the development of 06/2017/0324 would result in a slight impact regarding increased traffic on Lea Road. To mitigate the assumed distribution of traffic and discourage additional traffic from using Lea Road, mitigation measures proposed by 06/2017/0324 include road safety improvements on Lea Road to reduce the attractiveness of the route for rat running traffic, reduce vehicle speeds, and improve facilities for pedestrians at Lea Road.

17.6.24 Lea Road has a signalised canal crossing and speed bumps which would reduce the desirability of road users to drive along it in favour of the new Cottam Link Road.

17.6.25 Traffic modelling undertaken of the Scheme indicated that there would be negligible impact upon the capacity, safety or operation of the surrounding

highway network and as a result no mitigation measures would be required. As such, it is unlikely that there would be any adverse cumulative impacts on the local road network as a result of the development of the Scheme.

Water and Hydrology

17.6.26 Any proposed developments would need to comply with the requirements of national and local policy with regard to flood risk. As such any developments within the study area would have a neutral impact on flood risk throughout their development life and therefore, there would be no potential for significant inter-project cumulative effects.

17.7 Monitoring and Management - Operation

17.7.1 During the initial operational years of the Scheme opening, it is anticipated that the environmental effects of the Scheme are monitored where required. Details of the proposed post construction monitoring programmes for each environmental topic are available in the corresponding ES chapter.

17.8 Inter-Project Impacts

17.8.1 The overall significance of the cumulative impacts of the other developments with the Scheme is considered to be non-significant for all environmental impacts with the exception of landscape and ecology. Brown hare habitat would be further reduced with the development of the Scheme in combination with the habitat reduction caused by developments:

- 06/2017/0324;
- LCC/2016/0046;
- 06/2015/0530;
- 06/2020/0888.

17.8.2 This is due to the encroachment of the Scheme on an already reduced habitat due to the scale of housing development in the area around Cottam Parkway Railway Station. This is likely to cause a Moderate Significant Adverse Impact during construction and operation.

17.8.3 The Scheme would have adverse impacts on the views of residents and canal users in cumulation with the additional developments that occur in Cottam. All landscape and visual receptors would experience slight adverse or neutral residual effects by operation summer year 15 as the screening and planting of the Scheme would have achieved sufficient height and density. Therefore, the cumulative impact of the Scheme on the landscape would be Slight to Minor Adverse which would result in a nonsignificant impact during operation and a short term Moderate Significant Adverse Impact during construction.

17.9 Summary

17.9.1 Based on the information provided in the relevant ES chapters and the assessment of cumulative effects throughout this chapter, the Scheme is likely to have adverse impacts on landscape and ecology.

17.9.2 Without mitigation, the Scheme would contribute to the removal of hedgerows and trees that would further impact the local ecology. However, the Scheme does propose to achieve biodiversity net gain and so, once planting is established there would be a 10% increase in biodiversity in the local area to compensate for the removal of hedgerows, trees and general loss of habitat. The exception to this would be the loss of habitat for brown hare where the cumulative habitat loss would increase the level of impact and be significant for brown hare at the Local level.

17.9.3 The Scheme would have major to slight adverse impacts on the views of residents and canal users in cumulation with the additional developments that occur in the area of Cottam. All landscape and visual receptors would experience slight adverse or neutral residual effects by operation summer

year 15. The landscape North West Preston would continue to be developed in the 15 year period with housing and road schemes. These changes in the wider landscape are likely to be reflected in the site area and immediate surroundings as sites to the north and south of the Scheme are developed into housing.

17.9.4 Significant cumulative effects are not predicted for air quality, noise and vibration, socioeconomics, traffic and transport and water and hydrology. Consequently, the Scheme would not significantly contribute to cumulative environmental impacts on the wider area of North West Preston.

17.10 References

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