8. Transport

Introduction

8.1 Chapter 12 within the original EIA submission (March 2014), assessed the transport impacts associated with the development proposals. As part of the original assessment, desktop and site studies were undertaken as well as consultations with the then DoE Strategic Projects Team, Transport NI, Translink and the Police Service of Northern Ireland.

8.2 It was noted that some of the impact associated with the proposed development will not be wholly new impacts, as the existing quarry benefits from extant planning permission and therefore generates its own impacts. In preparing a TA for the development proposals, it is standard practice to assume that existing trips levels would be subsumed within the baseline activities. The TA therefore focused on the increase in trips that would result from the development proposals (net trips).

8.3 The original Transport Assessment (TA) assessed the operational impact of the development proposals in terms of accessibility to the site by non-car modes as well as accessibility to the site by vehicles and the impact of additional traffic on the site access and surrounding road network.

8.4 A separate draft Construction and Environmental Management Plan (dCEMP) was also prepared in support of the development proposals and to inform the EIA. The draft CEMP helps clarify the potential traffic effects of the development proposals and sets out steps to be undertaken during construction to mitigate any potential impacts.

8.5 Mitigation measures as set out within the TA and draft CEMP have been considered and their effects included within the impact assessment.

8.6 The key findings from the original 2014 assessment were as follows:

- The TA identified the future traffic movements for the new facility and potential locations on the highway network that may experience some impact. Operational assessments of the relevant junctions demonstrated that there would be no tangible reduction in highway performance as a result of development traffic. The environmental impact of the proposed development on transport issues was therefore assessed as neutral.

- The draft CEMP was developed to ensure that the construction phase of the development would have minimal impact on the site or its general vicinity. The environmental impact during the construction phase of the proposed development with respect to transport was assessed as moderate due to the relatively significant traffic volumes and diversionary routing in place during the construction period. However, it should be noted that this impact was confirmed as temporary/ short-term.

- The development proposals involve upgrading and widening of Boghill Road with improvements to the visibility splays at the Boghill Road/ Hydepark Road junction and

forward visibility on Hydepark Road. These improvements will improve road safety and the general convenience of road users.

- In terms of indirect impacts, it is considered that transport could have potential indirect impacts on ecology, landscape, the water environment, noise and air quality. These impacts relate to both the construction and operational phases which will have in implications for the transport network. These indirect impacts are considered in detail in the various relevant Chapters of this Addendum and related chapters should be referenced accordingly.

- Cumulative impacts are impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the project under consideration. In summary, it is considered that there will be a slight cumulative effect due to the anticipated increases in traffic on the localised road network.

8.7 The TA concluded that:

- The impact assessment identified that the following junctions required further detailed modelling:
    - Junction 1 Hydepark Road/ Boghill Road; and
    - Junction 2 Hydepark Road/ Hightown Road
- The proposed development would provide a new upgraded junction at Junction 1 Hydepark Road/ Boghill Road.
- Operational capacity assessments were undertaken for both Junction 1 and Junction 2 and the approved TA concluded that with development traffic added to the network:
    - The proposed upgrades at Junction 1 ensured that the junction would continue to operate well within acceptable capacity thresholds with negligible queuing and delay.
    - The existing junction configuration of Junction 2 would allow it to continue to operate well within acceptable capacity thresholds with negligible queuing and delay.

PAC Appeal Hearing

8.8 Following receipt of a Notice of Opinion to Refuse, the applicant requested to be heard before the Planning Appeals Commission (PAC). This hearing was undertaken in October 2016. During the two-day hearing the Commission heard submissions and considered evidence from a number of parties.

8.9 In support of the 2016 hearing, Atkins reviewed the approved TA to ensure that the assessment remained valid and the conclusions appropriate. The review highlighted that due to the time that had lapsed between the preparation of the approved TA in 2014 and the hearing in

October 2016, the traffic count data exceeded the acceptable three year data threshold as outlined in paragraph 6.1 of Appendix D of the TA Guidelines.

8.10 New traffic surveys were therefore undertaken in March 2016 at all junctions surveyed as part of the original assessment and the committed development assumptions were also reviewed. A comparative exercise was then carried out to determine if any changes in local traffic volumes/ movements have occurred in the intervening period and if such changes were identified whether they have any impact upon the findings of the approved TA.

8.11 In particular, the review focused on three chapters of the approved TA which may be sensitive to changes in local traffic volumes, these included Chapter 5 – Existing Traffic Conditions, Chapter 11 – Impact Assessment and Chapter 12 – Operational Assessment.

8.12 Atkins prepared a Technical Note in 2016, Transport "Further Environmental Information (Transport FEI) review" which concluded that:

- There had been some traffic growth noted between 2013 and 2016;
- This traffic growth had not affected the traffic impact analysis and the same junctions were identified;
- No additional committed developments warranted inclusion in the analysis;
- The junctions affected by the traffic growth were re-modelled with the analysis confirming that the junctions would continue to operate satisfactorily and within accepted performance parameters; and
- The findings of the previously approved TA therefore remained valid.

2019 TA Review

8.13 The principal aim of this Chapter is to update the 2016 baseline data to assess whether its findings remain valid. It is informed by updated junction count data and by assessing committed developments which are approved in the vicinity of the development site as well as any other material change in circumstances which may affect the findings. The review concluded that:

- The latest traffic data which was collected in March 2016 to support the 2016 Transport FEI was almost out of date and reaching the end of the recommended lifespan;
- The committed developments were unchanged although it was noted that some had progressed to construction; and
- The accident data for the local road network was also out of date and should be re-visited.

8.14 To inform the preparation of a 2019 TA Review the following actions were taken:

- New traffic data was collected on 22nd November 2018 from 07:30 to 09:30 and 16:30 to 18:30;

- DfI Roads were contacted to identify if any new committed developments should be included in the update; and
- The PSNI were contacted to obtain new road traffic accident data for the period 2015 - 2018.

8.15 The 2019 TA Review technical note is included as Appendix 8.1.

Methodology

8.16 As set out previously, the 2016 Transport FEI and the latest 2019 TA Review highlighted that although there have been some changes in background traffic, accident data and public transport services since the original application was undertaken, these changes do not affect the previously reported traffic impact of development or the operational capacity assessments originally undertaken.

8.17 Table 8.1 therefore sets out an initial summary to identify the potential implications of the 2019 TA Review on the previous conclusions of Chapter 12 of the original EIA submission as well as the 2016 Transport FEI. For those areas requiring further consideration additional information is presented in the remainder of this Chapter.

Table 8.1 Summary of Transportation Elements to be Considered

Transportation Element	Description	2016 Transport FEI	Summary from 2019 TA Review	To be considered further within 2019 ES Addendum
Policy Guidance	Regional Development Strategy; Regional Transportation Strategy; Planning Policy Statements; Accessible Transport Strategy; Sustainable Development Strategy and Implementation Plan; Belfast Urban Area Plan; Draft Belfast Metropolitan Area Plan; and Belfast Metropolitan Transport Plan.	Previous Policy considered remains applicable, no notable changes to be considered	Previous Policy considered remains applicable, no notable changes to be considered	No
Baseline Transport • Traffic Volumes • Committed Developments • Road Safety Statistics • PT/ Walk/ Cycle Environment	Traffic Volumes • Scullions Road – Approx 20,000 two-way vehicles per day; • Mallusk Rd – approx. 12,000 two-way vehicles per day; • Hightown Rd – approx. 9,000 two-way vehicles per day; • Hydepark Rd – Approx 4,000 two-way	Traffic Volumes have changed slightly since the original TA Assessment, although DfI Roads has confirmed that no additional committed developments need to be considered.	Traffic Volumes have changed slightly since the original TA Assessment, although DfI Roads has confirmed that no additional committed developments need to be considered. Road Safety statistics have changed slightly but conclusions remain appropriate. Slight changes to Bus timetable	Yes • Traffic Volumes • Road Safety No • Committed Development • PT/ Walk/

Transportation Element	Description	2016 Transport FEI	Summary from 2019 TA Review	To be considered further within 2019 ES Addendum
	vehicles per day;		information and overall, PT/ Walk/ Cycle environment consistent with original assessment.	Cycle Environment
Impact Assessment	Two Junctions Exceed the 5% Threshold Requirement to trigger the need for further detailed operational assessments, those junctions are: • Hydepark Rd/ Boghill Rd junction and • Hydepark Rd/ Hightown Rd junction	Given the increase in traffic level since the original assessment, reported percentage impacts vary slightly from those previously reported. However, as per the original TA, the same two junctions exceed the 5% Threshold Requirement		Yes
Operational Assessment	Detailed operational assessments of both junctions that exceeded the 5% Threshold requirements demonstrated that these junctions continue to operate well within operations thresholds.	Both Junctions to be impacted upon (Hydepark Rd/ Boghill Rd junction and Hydepark Rd/ Hightown Rd junction) are predicted to operate will within acceptable capacity thresholds as reported within the original TA and ES Chapter.		Yes

8.18 This analysis confirms that it is necessary to investigate if these changes in traffic flows, accident data and public transport services impact the findings set out within Chapter 12 of the original EIA submission/2016 FEI.

8.19 In accordance with EIA guidelines, the following potential net impacts generated by development proposals have been considered to help understand the requirement for mitigation measures:

- Change in traffic conditions e.g. increased queuing and delays;
- Change in public transport conditions e.g. increased waiting for public transport;
- Change in highway infrastructure – e.g. for local residents;
- Effects on car users; e.g. impacts local road users and development traffic;
- Effect on pedestrians; and
- Effects on local residents.

8.20 In keeping with Chapter 12 of the original EIA submission's Significance Criteria and based on the type of potential consequences occurring and the magnitude of consequence, the proposed site's construction and operational assessment (after mitigation) has been undertaken as presented In Table 8.2.

Table 8.2 Magnitude of Impact Criteria

2014 Terminology
Neutral: where there will be no overall impact.
Slight: where impacts will be observable but where the scale of the impact is unlikely to be of material significance in the locality.
Moderate: where impacts could occur which will have effects on factors recognised as being of local importance or implication.
Substantial: where impacts could occur which have implications for factors which are of recognised regional importance.
Severe: where the potential impact is likely to affect a matter of recognised national or international importance or affect a recognised national or international guideline or standard, or to be of major implication to the character or context of the area in which the feature or factor is located.

8.21 Indirect impacts, cumulative impacts and impact interactions will also be considered.

Assessment

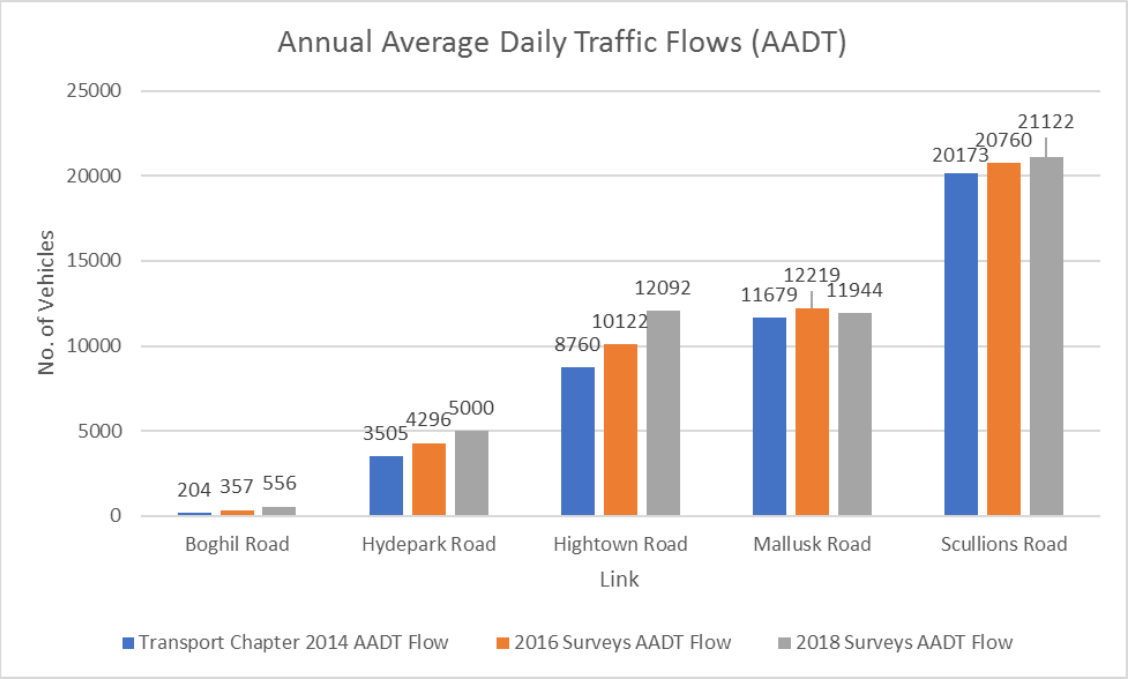
Explanation of Baseline Conditions

8.22 The previous assessments in 2014 ES and updated in the 2016 Transport FEI for the PAC hearing provided Annual Average Daily Traffic (AADT) flows for the following links within the study area:

- Boghill Road;
- Hydepark Road;
- Highway Road;
- Mallusk Road; and
- Scullions Road.

8.23 As part of the 2019 TA Review, new traffic data was collected at all junctions previously surveyed and the ADDT Figures previously reported have been updated. Figure 12.1 provides a comparison between the AADT figures previously presented 2014 Transport Chapter of the EIA, and revised data collected as part of the 2016 Transport FEI and the latest 2019 TA Review.

Figure 8.1 Daily Traffic Flows



8.24 Figure 8.1 demonstrates that in most instances, the background traffic recorded at the time of the 2016 and 2018 Traffic Surveys was slightly higher when compared against the observed traffic levels in the original 2014 assessment. The potential impacts of these changes in background traffic was fully considered as part of the 2016 Transport FEI and latest 2019 TA Review.

Committed Development

8.25 As set out within the 2019 TA Review, it is likely that the changes in base traffic is a result of committed developments (Blackrock and Hightown Road) being constructed and occupied. The original approved TA and the 2016 Transport FEI prepared for examination at the PAC hearing had made allowances for these committed developments. Atkins liaised with DfI Roads who have confirmed that no new committed developments need to be considered in addition to those assessed as part of the original approved TA. For robustness however and to reflect the difficulty in confirming accurately the degree of build out of these developments, the original assumptions/ volumes for committed developments have been retained. The effect will be to have higher traffic volumes included in the traffic modelling due to a degree of double counting but this will provide a safety margin in the assessment.

Road Safety

8.26 Atkins has consulted PSNI Statistics team to obtain the latest road safety data for the last 3 years (from 1st October 2015 to 30th September 2018) for the road network in the vicinity of the proposed development. This enabled a comparison of recent accident levels with those reported in the original approved TA and Transport Chapter.

8.27 The latest information received from PSNI Statistics team shows that were 12 slight collisions and a total of 25 injuries recorded within the study area over a 3 year period between October 2015 and September 2018.

8.28 Information received in 2016 from the PSNI Statistics team showed that there were 11 slight collisions and a total of 22 injuries recorded within the study are over a 3 year period between April 2013 and March 2016.

8.29 The original submission showed that there was 1 serious collision and 17 slight collisions with a total of 27 injuries recorded within the study area over a 3 year period between April 2010 and March 2013.

8.30 In summary:

- The total number of collisions in the vicinity of the site between April 2013 and March 2016 is less than the number recorded between April 2010 and March 2013, 11 vs 18; and
- The total number of injuries in the vicinity of the site between April 2013 and March 2016 is less than the number recorded between April 2010 and March 2013, 22 vs 27.
- The total number of collisions in the vicinity of the site between October 2015 and September 2018 is less than the number recorded between April 2010 and March 2013, 12 vs 18; and
- The total number of injuries in the vicinity of the site between October 2015 and September 2018 is less than the number recorded between April 2010 and March 2013, 25 vs 27.

8.31 The 2016 Review and the 2019 TA Review found that the latest accident data at the time of review is generally consistent with the accident levels presented previously and it is therefore considered reasonable to conclude that the findings of the approved TA in relation to road safety remain valid.

8.32 Nevertheless, as previously stated within the Chapter 12 of the original EIA submission, to enhance road safety in the vicinity of the site road improvements will be provided in the form of enhanced visibility at the Boghill Road/ Hydepark Road junction and widening of the Boghill Road to deliver betterment to the existing alignment and forward visibility at this location.

Explanation of Proposed Operational Movements

8.33 Key information presented within Chapter 12 of the original EIA submission is summarised below and is considered to be unchanged and remain current:

- Proposed site will have the capacity to accept up to 300,000 tonnes of waste annually;
- The proposed operational waste vehicles that will be transferred to the site is 143 vehicles arriving and 143 departing the site in a typical daily weekday (equates to 286 two-way vehicles);
- During peak periods there will be 32 two-way operational vehicles during the AM peak (07:45-08:45) and 2 two-way operational vehicles during the PM peak (16:45-17:45);
- The waste operation hours for the site will be between 07:00 and 18:00 during the weekdays and therefore waste operational vehicles will only enter and depart the site during this time. Waste deliveries will also occur on Saturday morning although there will be no Sunday deliveries
- There are four primary routes which operational vehicles associated with the Waste Treatment Facility can utilise from the M2 Motorway when arriving/ departing to/ from the site (B95 Mallusk Road, Hightown Road, Upper Hightown Road, Hydepark Road)

Predicted Environmental Effects and their significance (Construction)

8.34 Key information presented in Chapter 12 of the original EIA submission is summarised below and is considered to be unchanged and remain current:

- Traffic movements associated with the construction phase will include cars and light goods vehicles (LGVs) for construction workers as well as heavy goods vehicles (HGVs) delivering construction materials and plan to the site.
- Potential risks include:
    - The spillage of materials and carrying of soil from the site onto carriageways; and
    - The disturbance of adjacent landowners and people using the road network in the area.

- A separate Construction Management Plan (CMP) has been prepared to address the detailed procedures, sequencing and construction methodology anticipated by the project team engaged in the planning, liaison, and construction of the project. The CMP outlines detailed proposals for temporary traffic and environmental measures to be adopted during construction. Also includes supplementary information on detailed construction practice that will be adhered to during the development of the site.

Predicted Environmental Effects and their significance (Operation)

8.35 The 2019 TA Review has refreshed the Traffic Impact Assessment prepared most recently in 2016 for the PAC hearing. Previously, an opening year of 2018 and design year of 2028 and 2033 were used as part of the traffic impact assessment. Given that new traffic surveys were collected as part of the 2019 TA Review, these assessment years were updated as follows:

- Opening Year = 2023; and
- Design Years = 2033 and 2038.

8.36 The 2019 TA Review re-endorses the conclusion of the original TA's Traffic Impact assessment and the subsequent 2016 FEI in that only two junctions (Hydepark Road/ Boghill Road and Hydepark Road/ Hightown Road) exceed the 5% threshold required to undertake detailed analysis to determine their operational performance without and with development traffic.

8.37 Based on the 2019 review, it is considered that the conclusions within Chapter 12 of the original EIA submission that potential operational impacts associated with the development are not significant and are localised in their area of influence is unchanged and remains valid.

8.38 The original Transport Chapter also noted that although there will be an increase of operational traffic to the site, the junction operational assessment indicated that the junctions perform within sufficient capacity threshold limits. The 2019 TA Review revisited the traffic modelling and this conclusion remains valid.

8.39 Furthermore, the original Transport Chapter concluded that the operation of the waste facility will not raise potential issues of (pedestrian) severance of Hightown Road as a result of increased traffic volumes given the level/ quality of good pedestrian infrastructure along Hightown Road and in the vicinity of Edmund Rice College. Based on the latest review undertaken, this conclusion is considered to remain valid.

Description of Proposed Mitigation Measures (Construction)

8.40 Key information set out within Chapter 12 of the original EIA submission is summarised below in relation to proposed mitigation measures during the construction of the development:

- Suitable traffic management arrangement will be put in place to control traffic in all of the working areas during the construction phase. All proposed measures will be agreed in advance between appointed contractor and DfI Roads. Appointed contractor will also liaise

closely with DfI Roads during the construction phase to ensure any unexpected issues arising can be addressed quickly and appropriately;

- A CMP has been prepared to address the detailed procedures, sequencing and construction methodology anticipated and outlines proposals for traffic and environmental management measures to be adopted during construction. This also includes proposals for diversionary routes required for the upgrade of Boghill Road

8.41 Information set out within Chapter 12 of the original EIA submission in relation to the proposed mitigation measures during construction is therefore considered to remain unchanged and valid.

Description of Proposed Mitigation Measures (Operation)

8.42 Key information set out within Chapter 12 of the original EIA submission in relation to proposed mitigation measures when the proposals are in operation and are considered to remain unchanged and valid.

8.43 Mitigation measures presented within Chapter 12 of the original EIA submission are summarised below:

- Upgrade and widening of the Boghill Road to enhance forward visibility and improvements to provide adequate visibility splays at the Boghill Road/ Hydepark Road junction and forward visibility and forward visibility on Hydepark Road;

- Provision of a new footway along Boghill Road and cycle parking facilities will be provided within the site to encourage travel to the site via walking and cycling. Within the site, footways will be provided to facilitate ease of access for all and routes will be clearly identified and supported by appropriate signage. Pedestrian, wheelchair and cycle access will be segregated from the vehicle access and will be designed to include minimal crossing points; and

- Two coach spaces will be provided on-site within close vicinity of the visitor car park and sufficient car parking spaces for staff and visitors will be provided.

Description of Residual Effects and their Significance taking Mitigation into Account (Construction and Operational)

8.44 Based on the latest information collected and the analysis undertaken to date as discussed within this Chapter and set out within the 2019 TA Review, the conclusions set out in paragraphs 12.51 to 12.55 in Chapter 12 of the original EIA submission remain valid and these are summarised below:

- Operational assessment of the relevant junctions has demonstrated that there will be no tangible reduction in highway performance as a result of development traffic. The impact of the proposed development on transport issues is therefore assessed as neutral;

- The impact during the construction phase of the proposed development on transport is assessed as moderate due to relative significant traffic volumes and diversionary routing during the construction period. However it should be noted that this will be a short term impact;

- The proposed mitigation to Boghill Road and the Boghill Road/ Hydepark Road junction will improve road safety and the general convenience of road users;

- Transport issues (both construction and operational) could have a potential indirect impact on ecology, landscape, the water environment noise and air quality, and these are considered in detail within the various relevant Chapters of the EIA; and

- In terms of cumulative impacts, it is considered that there will be a slight cumulative effect due to the anticipated increases in traffic on the localised road network.

Conclusion

8.45 From the review set out within this Chapter and the 2019 TA Review, it is concluded that the findings and recommendations/ mitigation set out within the original approved assessment and the 2016 Transport FEI remain valid and current.